BIBLIOGRAPHICAL NOTICES.

XIV. *Observations on Injuries and Diseases of the Rectum.* By Herbert Mayo, F. R. S. Surgeon to the Middlesex Hospital. London, 1833. pp. 220. oct.

Diseases of the anus and rectum are sources of great distress to a no small portion of the human family in every quarter of the globe; some of them are among the most painful, and others among the most disgusting affections which fall under the notice of the surgeon, and he who contributes in the slightest degree to elucidate their nature and treatment, deserves the cordial thanks of the profession and the public. The authors who have written upon these complaints are indeed sufficiently numerous to furnish no inconsiderable catalogue; yet it is to be regretted that the diagnosis of the various morbid changes which occur at the outlet of the alimentary canal, is still involved in great confusion. Under each of the several heads of neuralgia, fistula, piles, scirrhus, &c. we frequently find diseases enumerated which have no resemblance in their causes, nature, or location, until it has become almost necessary for an author, who wishes to be definite, to explain his own acceptation of terms familiarly employed by all: even the anatomy of the parts interested is not sufficiently borne in mind by most of the writers who treat upon their chirurgical treatment. Lest we should be deemed harsh or hasty in these strictures, when it is remembered that men of high merit and universal reputation are among the censured, we will mention one or two facts in explanation of our meaning. Under the heads of hæmorrhoids, we find included by different teachers of eminence, all the following affections:—varicosity of the hæmorrhoidal veins, ecchymoses about the anus, dense and firm tumours of little vascularity, partial evertions of the integuments of the anal canal, hypertrophy of the mucous membrane, various excrescences exterior to the anus, condylomata, (which are even described by some as fleshy tumours,) and probably some other enlargements, for we cannot pause to complete the list! When a surgeon, then, speaks of a case of piles, who shall comprehend to which of these heterogeneous affections he alludes? As to the vagueness in using anatomical terms, we will merely refer to the almost constant habit of speaking of the sphincter muscles in the singular number, as though there existed but one sphincter; a habit well calculated to confuse the student in his practical inferences, as will be perceived hereafter.

The little work before us is by no means free from the defects just mentioned, but it is written, upon the whole, with considerable perspicuity, and although it may not add very largely to the stock of knowledge already possessed by the profession, it contains many valuable facts and suggestions, marked by a due degree of originality.

The first chapter of Mr. Mayo's work treats of *lacerations of the rectum* whether partial or complete. To the former species of laceration he applies the term *fissure of the mucous membrane.* It is a transverse rent in the internal membrane caused by the action of indurated fæces in persons habitually costive, and is located *just within the sphincter,* (i. e. the internal sphincter.) This accident must not be confused with the *fissure of the anus* of Boyer, which is generally seated just within the *external sphincter,* and is always longitudinal, for these affections are very widely different both in symptoms and treatment. Exquisite soreness is generally felt at the moment of the accident, and is renewed, with increasing severity, at each succeeding stool. The rent soon degenerates into an ulcer, and is readily recognised by the finger. It is surrounded by slight hardness, and is almost always found at the back part of the canal. The mode in which this laceration is produced must be obvious to all who are acquainted with the anatomy of the part. It is at first very simple in its nature, and yields readily to the daily use of enemata of warm water, the application of mild mercurial ointment, and proper laxatives; but, when neglected, it may produce a long train of deceptive symptoms, and may become exceedingly unmanageable, yielding only after the division of the sphincter, as performed in the operation for fistula in ano. Several very interesting cases are given, and the third case deserves especial attention, because its nature was at first mistaken.

The patient had been labouring under a train of anal symptoms for fifteen months previous to his application to Mr. Mayo; and the rent appears to have taken place but one month after their first commencement. The symptoms were briefly as follows:—heat and pain at stool, continuing some hours, followed by numbness; during the pain the anus was strongly drawn upward. The pain was extended to the hips and sacrum. A slight mucous discharge followed the laceration. Other symptoms led to a suspicion that the prostate gland was affected. The patient urinated frequently, pain deeply seated in the perineum followed the discharge, and mucous flowed from the urethra. The prostate gland was large, and tender on pressure. The patient was treated by the hip-bath, leeches to the perineum, and cups to the sacrum, opiate suppositories, and tepid enemata. The bowels became regular, but the other symptoms were unabated. At last the ulcer was detected, and as it did not yield to the usual measures of Mr. Mayo, the sphincter was divided, and the incision prevented from healing immediately by means of lint. Prompt relief was experienced, and under the application of mild mercurial ointment, the ulcer was cured. The affection of the urinary apparatus subsided, pari-passu, with the rectal disease.

This case is highly interesting, as an elucidation of the strong association between the urinary apparatus and the anus, and also from the resemblance between the symptoms described and those of the first stage of the neuralgia of the anus of M. Campaignic, or the tic douloureux of the bladder, as it is termed by many surgeons, with at least *equal* propriety. Indeed, it may be laid down as a safe and valuable practical precept, that when there is a difficulty in assigning an obvious cause for any unusual train of symptoms in the bladder or urethra, the anus and rectum should be carefully examined, and vice versa.

Next in order follows a case of recto-vaginal communication from complete laceration of the intestine; then another, of stercoraceous abscess from the same cause, in which there is nothing novel; both accidents occurring from costiveness. Mr. Mayo then gives some terrible instances of laceration from the use of syringes; among the rest he refers to a preparation in St. Bartholomew's Hospital from the body of a patient killed by the injection of a pint of water-gruel into *the cavity of the abdomen!*—and he states that a similar accident has occurred in private practice! Indeed, it is wonderful that more numerous disasters of this kind are not forced upon the notice of the public, when every ignorant nurse, and even patients themselves, are encouraged to thrust three or four inches of an inflexible metallic tube into a tortuous canal, of which they understand not the course, and when it is well known that if it is introduced in the usual direction, it comes to bear directly on the prostate gland, long before it has entered to that extent! No syringe, placed in unprofessional hands, should be furnished with more than two inches of pipe—Mr. Mayo says one inch and a half. The neglect of this precaution is believed to be one of the principal causes of the alarming frequency of diseases of the anus on the continent of Europe, and especially in France.

Our author next proceeds to speak of the lacerations occurring during labour, the horrible character of which, when they prove extensive, are well known to all as amongst the most distressing that can occur to a surgeon; fortunate indeed it is, that they are rare! Mr. Mayo has been repeatedly successful in closing extensive rents involving the sphincters, by relieving the tension of the sides of the opening, caused by the retraction of those muscles, by means of lateral incisions, such as are made in the operation for fistula. The muscles being thus divided on each side, the edges of the rent, if recent, are repeatedly stimulated by nitrate of silver, and if long neglected, are pared off and drawn together by sutures. After the rent is healed, the lateral incisions are allowed to heal, and the sphincters recover their power.

The second chapter treats of *protrusion of the rectum*. It contains a very fair cursory view of the affection, but we observe nothing of novel interest, and must therefore confine ourselves to a very few remarks. We must protest against the grounds upon which Mr. Mayo opposes the opinion attributed to Dupuytren, that prolapsus ani is a displacement of the mucous and submucous tissue only. This opinion is decidedly that of the mass of the profession, and our author opposes to it, firstly, a figure from a preparation in the museum of King's College, in which an inversion of all the coats of the intestine is presented, but without any history of the circumstance; and secondly, a case of his own, in which, after removing the lower end of the rectum, together with the sphincters, prolapsus of the whole intestine supervened. Upon such evidence he appears to draw the conclusion, that prolapsus ani is invariably an inversion of all the coats! No doubt the whole thickness of the intestine is sometimes involved, though we have always been inclined to doubt the possibility of such an occurrence in proper prolapsus ani, being disposed to attribute the complete eversion to the gradual descent of a true intussusception of the rectum occurring originally at the superior margin of the internal sphincter, or at the upper part of the sac of the rectum—both which accidents we have examined particularly, but we cannot pause to argue the point at present. Mr. Mayo objects to M. Dupuytren's mode of operating for the cure of confirmed prolapsus, by removing several folds of the integument around the anus; he recommends the excision of a single fold, (p. 43;) but certainly the number of folds removed should bear some relation to the mass of relaxed skin, which is often exceedingly redundant, and by its constant pressure dilates and weakens the sphincters, especially the sphincter externus.

The third chapter treats of *hæmorrhage from, and pain in the rectum.* In speaking of the nervous affections which not unfrequently deceive the practitioner, in cases of hæmorrhage from the rectum, the author refers to the very interesting case of a lady mentioned by Mr. Brodie in the Medical Gazette, Vol. V. where the disease was mistaken for stricture of the œsophagus. We recently heard from Dr. Samuel Jackson, of a most singular instance of hæmorrhoidal flux simulating disease of the heart, and at first treated as such. Whenever a female presents that peculiar aspect that marks the habitual and excessive loss of blood, accompanied by severe palpitations of the heart, or inexplicable nervous disorder of any kind, we should always assure ourselves as to the existence of hæmorrhage from the rectum as well as from the uterus.

In chapter fourth Mr. Mayo considers the nature and treatment of piles. As our limits will not permit us to analyze its contents, we dismiss it with the remark, that the second section, *on external piles,* is liable to the censure passed at the commencement of this article; it confuses, under one general head, several very distinct affections. At page 99, the author judiciously remarks, that "as a general rule, growths external to the anus are to be removed by the scalpel, as the tumours which form within, are, for the most part, best removed by the ligature," we cannot forbear alluding in this place to the beautiful method of operating adopted by Dr. Physick in cases of tumour partly within and partly external to the verge of the anus. He employs the ligature, but in order to prevent the terrible and dangerous agony resulting from the action of the ligature upon the exquisitely sensitive integument about the margin, he divides the integument round the external portion of the tumour, and carries the ligature through the route of the incision so as not to act upon any portion of skin, while he enjoys every security against dangerous loss of blood.

In the succeeding chapter, on *fistula in ano,* we are struck with the light manner in which the danger of hæmorrhage after operations is treated.

> "It sometimes happens, if the sinus extends some length by the side of the rectum, that a slight hæmorrhage follows the operation. This, however, is seldom more than bathing the part with cold water, and keeping it exposed, will arrest. *I have never seen it extend beyond this.* Still it is evident that smart arterial hæmorrhage may sometimes take place from the rectum, either after operations for fistula, or on other occasions." p. 118.

The author objects to the operation by ligature as unnecessarily tedious. We are not among those who live very strongly in dread of hæmorrhage from ordinary incisions about the rectum, being fully convinced that although it is often alarming in extent, and at other times concealed and insidious, yet it is controllable in most cases when the surgeon is both vigilant and thoroughly competent; but he who would undertake to lay open by the knife the whole extent of some fistulæ that are met with in the course of a tolerably extensive practice, would certainly find to his cost that there are vessels in the rectum, that cannot be checked by cold and exposure, or even by the needle and ligature, with all the aid of Weiss's improved speculum ani, yet these fistulæ yield readily to those means against which Mr. Mayo objects.

The remainder of the work is defective in arrangement, but it is replete with valuable matter. Twenty-three pages are devoted to a subject of great importance, but one which, perhaps, may be said never to have received a philosophical investigation;—the remote and immediate causes of costiveness. The theme is one that would require much more space than the entire volume occupies, in order to its full discussion, but short as are these remarks, they possess great interest, and are quite sufficient to expose the fallacy of the common custom of forcing or attempting to force the peristaltic action in all cases alike by means of purgatives. Next follow some remarks on the introduction of instruments into the rectum—rendered doubly valuable in consequence of the freedom with which some practitioners have of late recommended the dilatation of strictures in the sigmoid flexure of the colon, &c. operations that have been recommended with far too little caution, and which require consummate dexterity, the most accurate tact, and a profound knowledge of the anatomy of the parts, to render them even tolerably safe. According to Mr. Mayo, a good wax rectum bougie should be perfectly flexible when dipped in warm water. Even when perfectly flexible it meets with resistance after entering five or six inches, from its catching in the sacculi of the intestine, which it is impossible to avoid, and which it pushes before it like so many blind sacs. If force is used, the bougie tears the gut and enters the belly. Some nicety is required to distinguish this resistance from stricture, and surgeons are occasionally deceived. By gently withdrawing the instrument, changing its direction, and then again advancing it, the proper canal may be followed; Mr. Mayo makes no exception to this rule, but there is a preparation of a healthy rectum in the cabinet of Dr. Horner, Professor of Anatomy in the University of Pennsylvania, which we presume could not possibly have given passage to a bougie. An instrument from half to three-quarters of an inch in diameter is considered quite large enough, and if it passes readily without pain it may be safely presumed that there is no contraction. Before the introduction a double bend should be given to it—one to adapt it to the curve of the sacrum, the other to meet the inclination of the sigmoid flexure to the left, but as this flexure in some rare cases inclines to the right, the surgeon must be awake to any unusual resistance, and take his measures accordingly. Fortunately, it is seldom necessary to introduce the bougie beyond four or five inches—though Mr. Mayo once passed it three feet into the canal! The introduction of flexible tubes requires still greater care, because they are more liable to become entangled.

> "The great point which cannot be too strongly impressed on the mind of the practitioner, is the extreme delicacy of the part, and the readiness with which it will tear under very moderate pressure."

The subject of strictures of the rectum, both spasmodic and permanent, is treated at some length; much stress is laid on the proper regulation of diet as a means of counteracting the former, and many practical hints are given for the management of the bougie in the latter. Numerous highly interesting cases are narrated, and in several of them the permanent stricture was divided. This operation, however, the author does not recommend except under very pressing circumstances, because of the danger of concealed hæmorrhage into the rectum, which sometimes goes on to an alarming extent. (p. 174.) Cases are also given of strictures of the sigmoid flexure, and other parts of the colon, and of obstructions from invagination of the superior within the inferior portion of the rectum, as described by Mr. Earle and Mr. Chevalier. Then follows a very short notice of spasmodic and permanent contraction of the anus, the former of which he considers as "a kind of cramp."

The seventh, and last chapter, treats of cancer of the rectum in its two distinct forms, the one attended with firm, cartilaginous thickening of the muscular coat, with abrasion of the mucous coat, the other producing a fungoid growth, and attended with much greater thickening. The various means of lessening the evils inseparable from these incurable affections, and of prolonging life by regimen, the bougie, incisions, &c. are described.

We have then an account of the excision of a carcinomatous tumour within the rectum, by Mr. Crosse of Norwich, terminating ultimately in a return of the disease, and death: and a case in which Mr. Mayo removed the lower portion of the intestine, together with the sphincters, for a similar complaint. The patient enjoyed considerable comfort after the operation. The cicatrix formed a canal which neither embarrassed the discharge of fæces materially, nor permitted their involuntarily flux. Irremediable prolapsus supervened, and the patient died of abdominal inflammation about two years after the operation. The work concludes with another case of carcinoma terminating fatally after the partial removal of the diseased mass by ligature.

This treatise certainly contains much valuable matter; it is written in a lucid style, though it bears marks of haste, which are perhaps a sufficient explanation of its imperfect arrangement. The strongest censure which we pass upon it is a rare one in these latter times—it is too short; had it pleased the author to bestow upon the subject a little more time and space, the work would have been more worthy of the powers and practical information of the writer, and of the importance of the subject; and yet, perhaps, it is ungrateful to complain while we acknowledge that the obligation conferred is by no means inconsiderable.

R. C.

XV. *An Investigation into the Remarkable Medicinal Effects resulting from the External Application of Veratria.* By ALEXANDER TURNBULL, M. D. London, 1834. pp. 96.

Almost all the plants belonging to the natural order Colchideæ are possessed of energetic medicinal properties; this is owing to a peculiar principle common to them all—discovered by Pelletier and Caventou, and which has received the various names of *veratrinum, veratrina, veratria* and *sabadilline.* In a late memoir by Mr. Couerbe, it appears, however, that this substance is not a simple body, but is composed of three separate principles, which he terms, *veratrine, sabadilline,* and *mono-hydrate of sabadilline.*

The veratria of commerce is in the form of a fine white powder, without smell, but acting as a violent sternutatory. Its taste is acrid, and when introduced into the stomach, even in minute doses, acts as a powerful emetic and purgative. When applied externally, in the form of ointment, however, a very different series of actions are produced—"when rubbed upon the surface of the body to the extent of six or eight grains a day, for several weeks or even months together, it calms irritation, removes pain, and produces considerable elevation of spirits." Dr. Turnbull also states that such a degree of constipation is often induced as to require the use of purgatives. In diseases attended with aqueous effusion, the external application of veratria is attended with the happiest effects, as it acts as a powerful diuretic, which it never does in other cases.

Dr. Turnbull goes on to say, that the ointment causes no outward marks of irritation on the skin, even when the friction has been continued for some length of time; in some rare instances a slight blush is produced which soon vanishes. After some grains have been rubbed in, however, there is a sense of tingling and warmth in the part, and until this is produced, the peculiar effects of the medicine do not manifest themselves. After the ointment has been used until the general system is under its influence, the feeling of heat and tingling extends itself over the whole surface of the body, sometimes accompanied with involuntary twitchings of the muscles of the mouth and eyelids, but these latter symptoms disappear if the use of the ointment be discontinued for a day or two.

Dr. Turnbull has found that where veratria was applied to a part denuded of the cuticle, although the effects on the system were much greater than when applied to an unbroken surface, yet, that the extreme irritation which ensued forbade a repetition of the practice.

After having thus given an account of the general effects of the medicine, the author next proceeds to the consideration of the diseases in which he has found it useful. The first of which he speaks are *affections of the heart* in which although there is no decided organic derangement, the symptoms are of such a character as to be exceedingly distressing, as difficulty of breathing, with cough and expectoration, inability to remain any length of time in a recumbent posture, palpitation, &c. &c.

In these cases he recommends the ointment to be made with fifteen to twenty grains of veratria to the ounce of lard, and of this, a piece the size of a nut to be rubbed over the region of the heart for five minutes, once a day. During its action upon the system, the pulse increases in strength and regularity, and the distress and anxiety gradually wear away. Sometimes, however, the first or second application of the remedy induces a great increase of the palpitation, but when this irritation subsides, all traces of disease disappear with it.

Dr. Turnbull exemplifies its use in these anomalous disorders, by a variety of cases, which are extremely interesting and fully confirm his statements of the efficacy of the remedy. The next class of disorders in which he has found veratria useful are the neuralgic affections, and he states that in these the relief afforded is speedy and almost certain, and that in tic douloureux the paroxysm has been brought to a termination by the first friction, and never returned. In most cases the ointment of the strength above-mentioned has been found sufficient, but in some cases it has been requisite to use it of greater power, even as high as forty grains to the ounce of lard.

In rheumatism Dr. Turnbull has used it in the acute stage of the disease with decided benefit after the usual antiphlogistic remedies had been resorted to. From the extent of surface affected in this disease, and the quantity of ointment required to be used, the proportion of veratria should not be as great as in the cases last mentioned, but should bear a certain relation to the space over which it is applied.

In paralysis he has not been enabled to try the effects of this remedy in sufficient number of cases to lay down any general rules for its employment, but in those in which he did use it, he was well satisfied with its effects.

In dropsies he speaks of its successful employment in the highest terms, especially in hydrothorax, ascites and anasarca; many cases of which he states were cured in a week or two, even where the severity of the symptoms was such as to threaten the life of the patient in a few hours. There appear, says he, to be two states of the disease in which the veratria is useful. One, where the pathological condition of the organs on which it depended has been removed; yet, where the aqueous effusion remains from a want of action in the absorbents; the other, where the organic change is such as will admit of no remedy. In the former, the use of the veratria soon restores the patient to health, and in the latter, great relief is afforded. It is necessary to obtain the full benefit of the remedy in dropsy, that preliminary measures may be adopted to put the constitution of the patient in as good a state as possible before it is made use of.

In addition to these diseases, Dr. Turnbull has derived much benefit from the use of veratria in gout, amaurosis, &c. He concludes by stating, that it is of primary importance, that the veratria be in a state of purity, or the practitioner will be disappointed in the expected results, and adds that much found in commerce is adulterated with phosphate of lime.

We are afraid that Dr. Turnbull, like most other advocates of new remedies, has viewed this article in too favourable a light, and that a more extended use of it will show that it is not as infallible as his book would lead us to believe. At the same time it richly deserves a trial, and we hope the results may be as successful as those of the author of the memoir. R. E. G.

XVI. *Transactions of the Medical Society of the State of New York. Vol. II. Part I.* To be continued annually. Albany, 1834. 8vo. pp. 176.

The printed transactions of the various medical associations of Europe, rank among the most interesting and useful of the works which compose the library of the practical physician. Among the essays they contain are to be found the original sketches, or more properly the nuclei of many of those valuable monographs in the various departments of our science, for which the profession is indebted to the industry and talents of some of its most distinguished members.

In this country but few of our medical institutions are in the habit of publishing their own transactions: the members preferring, in general, to present their respective communications to the public through the medium of some one of the medical journals published amongst us. The latter practice is in many points of view, we are persuaded, to be preferred. However more imposing a volume of medical transactions may seem, yet, from the long intervals at which such works ordinarily appear, the very great expense attending their publication, and their consequent contracted circulation, it is evident that the interests of all the members of the medical profession, as well they who communicate as they who seek for information, are far better served by inserting the transactions of medical societies in the professional journals already established, than by publishing them as separate works. In relation to this as well as to all other subjects of a scientific nature, utility should be preferred to every other consideration.

Notwithstanding but few volumes of American medical transactions have appeared, these few will bear a very favourable comparison with the printed transactions of the most celebrated of the medical institutions of Europe. In evidence of this statement, we might adduce, in particular, the transactions of the state medical society of New York, the contents of the initial part of the second volume of which we are now about to notice. It contains eight articles on different subjects, no one of which can be read by the physician without interest, nor without his deriving from it some important practical hint.

Art. I. *Annual Address on Dysentery.* By Thomas Spencer, M. D.—In this essay we have an excellent, though concise account of the symptoms and causes of dysentery, (in the course of which the writer presents some judicious remarks upon the nature of epidemics generally) a very correct view of the pathology of the disease, and an able outline of its proper treatment.

Dr. Spencer ranks blood-letting, both general and topical, among the most important remedies in the ordinary cases of dysentery. Its neglect in the early stages of the attack has in very many instances, we are persuaded, subjected the patient to a very great amount of unnecessary suffering, and not unfrequently to such neglect is to be attributed mainly the fatal termination of the disease. Dr. S. very properly objects to the usual plan of irritating the diseased bowels by repeated doses of active purgatives; preferring to abate the morbid irritability and increased action of the intestines by the judicious employment of opiates.

Dr. S. speaks strongly in favour of emetics in the treatment of dysentery. In the very onset of the disease, when the stomach is free from any very decided irritation, we have derived from their administration the most decided good effects; but at a later period we doubt very much the propriety of resorting to their use.

Art. II. *Medical Topographical Report of the County of Columbia, drawn up by a Committee of the Medical Society of that County.*

Art. III. *Medical Topographical Report of the County of Madison.* By Alvin Foord, M. D.

Both of these are useful and interesting papers. Our physicians generally are beginning to appreciate the importance of similar reports, and we trust that the time is not far distant when we shall be presented with them from every section of the United States. Such reports when accurately drawn up afford materials for a medical geography of the country, and are calculated to shed not a little light upon the causes of endemic, if not of epidemic diseases generally.

Art. IV. *Observations on the Use of Cold Applications in Local Inflammation.* By Dr. Campble Waldo.

The remarks of the author are confined principally to the importance of cold applications in wounds of the large joints, as an efficacious means of preventing the occurrence of inflammation, as well as of reducing it when present. The correctness of the views advanced by Dr. Campble are supported by general experience. So simple and at the same time so powerful a remedy is cold, whether applied in the form of cold water or of ice, in preventing and reducing inflammation, that in a large class of injuries, and of external and internal diseases, it may with great propriety be ranked, upon the list of antiphlogistics, immediately after general and topical blood-letting.

Art. V. *On the Use of Opium in Bowel Affections.* By C. King, M. D.—In the present paper Dr. King confines his remarks almost exclusively to the use of opium in the treatment of colic. He commences by pointing out the folly of attempting the cure of this disease by a course of purgation. Consisting as it does, essentially, in an irritation of the mucous membrane of the large intestine, which in the more violent grades of the disease is liable to run rapidly into the most acute inflammation, and to terminate in gangrene, unless promptly arrested by appropriate remedies, it is evident that purgatives can have no other effect than to increase the irritation which constitutes the disease, and to accelerate its fatal termination.

> "In almost thirty years practice of medicine," the Doctor observes, "I never saw a case of colic in which I could trace constipation of the bowels to be the exciting or proximate cause. With me, then, there is no reason why cathartics should cure colic, on any other principle than that of depletion. The difficulties which accrue from the exhibition of cathartics in this complaint are often insurmountable and fatal to the patient. These considerations have induced me to abandon the use of cathartics in colic, and to restore this conclusion—that the first stage is the time for the physician to act. In this stage the indication of cure are, to remove the spasm and morbid sensibility from the intestines. To answer these indications, the warm bath, semicupium, fomentations of the abdomen, and injections, are useful, and ought not to be omitted. But when the attack is severe, the spasm violent, and the sensibility great, relief is only to be obtained on general principles. These are blood-letting and opium. Bleed as copiously as you would in pleurisy, and then give opium in as large doses as you would in epilepsy (?) and repeat the exhibition once an hour, till the patient becomes entirely free from pain, and falls asleep."

The practice here recommended is by no means a new one, or one peculiar to Dr. King. Twenty-three years ago we were taught by our medical preceptor in all violent cases of colic to bleed copiously, immerse the patient in a warm bath, and then putting him to bed, to administer a large dose of opium. Ever since we have been engaged in practice we have pursued the same plan of treatment, and have seldom been disappointed in its results.

Art. VI. *On the Utility of Iodine in Cases of Ununited Fractures.* By Westel Willouby, M. D.—In this paper a single case is related, in which after various means had been unsuccessfully employed to produce the union of a fracture in the bones of the leg, lotions to the fractured limb were resorted to, composed of a mixture of two parts of lime water, and one of the tincture of iodine. This lotion was repeated twice a day, using at the same time considerable friction. Within eight weeks from the commencement of the use of the iodine the union of the fracture was complete.

Art. VII. *Documents and Papers Explanatory of the Progress of Cholera, in the Auburn and Sing Sing State Prisons, during* 1832.—This article contains many interesting facts in relation to the disease of which it treats, but nothing peculiarly striking or novel.

Art. VIII. *An Essay on the History, Causes, and Treatment of Typhus Fever; to which the Annual Prize for the year* 1828 *was awarded.* By Alfred Y. Magill, M. D. of Winchester, Virginia.—This is the longest article in the present number of the transactions, occupying about eighty-two pages. The essay confers a very great deal of credit upon its author. Although had we sufficient space to enter properly into a review of it, we should be inclined to dissent entirely from the opinions of the writer in relation to the correct pathology of typhus fever, and would be obliged to deny the correctness of a few at least of his directions for its treatment; we should, nevertheless, be constrained, viewing the essay as a whole, to bestow upon it our warmest approbation. Although the author has not in our opinion arrived at a correct view of the organic lesions by which the phenomena of typhus fever is produced, nor laid down in all its details the proper treatment for their removal, he has the good sense to perceive the folly, and reject the ridiculous notion almost universally prevalent a few years since, that the disease, namely, is one essentially of debility, demanding for its cure the liberal use of the most active and diffusible stimulants, and forbidding the employment of every species of direct depletion; a notion that has produced almost as great a destruction of human life as the disease itself.

Dr. Magill on the contrary has endeavoured to show, from the various circumstances and phenomena incident to typhus fever, that so far from being a disease of debility, it is essentially one of excitement, and frequently of inflammation and its consequences. He has further pointed out the fact, that the autopsical examination of subjects who have died of the disease, satisfactorily prove death in this variety of fever to be in general, if not always the result of inflammation, disorganizing some important part of the animal machine.

The remedies Dr. M. insists upon, for the cure of typhus, are blood-letting early and judiciously employed; active purging; the affusion of cold water upon the skin; blistering and the other items of the antiphlogistic treatment. Bark and wine he considers to be but seldom indicated. "The majority of cases of typhus," he remarks, "when treated properly in the primary stages, will not often require the use of stimulants in the last." A proposition, the truth of which we can affirm from the result of very considerable experience.

We shall not stop to notice the several points in relation to which we differ in opinion from Dr. M. In discussing the subject of typhus fever it is all important to define accurately the precise concourse of symptoms to which the term is intended to be restricted. By neglecting to do this, Dr. M. has, we apprehend, in common with the majority of medical writers been led into the error of grouping together the pathological signs of morbid conditions of various internal organs, differing materially from each other, and demanding for their removal important modifications in the nature of the remedial agents resorted to.

D. F. C.

XVII. *An Account of Jane C. Rider, the Springfield Somnambulist: the Substance of which was Delivered as a Lecture before the Springfield Lyceum.* By L. W. Belden, M. D. Springfield, 1834. pp. 134. 12mo.

Jane C. Rider, whose remarkable and interesting history is the subject of the small volume before us, is in the seventeenth year of her age, and the daughter of a respectable mechanic of Brattleborough, Vermont. In early infancy she lost her mother, who died of some disease of the brain. Jane resided with her father and the friends of her mother until April, 1833, when she removed to Springfield, where she is represented to have secured the confidence and love of all with whom she was connected.

"Her education is superior to that which is usually acquired by those occupying the middle rank in society. She is fond of reading, and especially delights in poetry, her selections of which generally evince a chaste and correct taste. Though of a full habit, her appearance is prepossessing, and her plump and rosy cheeks, by the unprofessional observer at least, would be regarded as the index of perfect health. She, however, has always been subject to frequent head-aches, and other symptoms arising from an undue determination of blood to the head; and about three years since was, for several months, affected with *Chorea.* A small spot on the left side of the head, near the region which phrenologists assign to the organ of '*marvellousness*,' has since her earliest recollection been *tender*, or painful on pressure, and the sensibility is much increased when she suffers from head-ache. During the paroxysms to which she has lately been subject, this spot, at all times painful, is frequently the seat of such intense agony as to induce her to exclaim, 'It ought to be cut open—it ought to be cut open.' Her eyes are so sensible to the light, that she invariably suffers when she goes abroad in a clear day without a veil. From her infancy she has been in the habit of sleeping more soundly, and a greater number of hours, than is usual. She is seldom conscious of dreaming, and rarely wakes of her own accord in the morning. In her childhood she was in the habit of occasionally rising in her sleep, but did not manifest any of the peculiar powers on those occasions which have since rendered her case so remarkable."

She was first attacked with the singular affection about to be described, on the night of the 24th of June; it was then supposed that she was deranged. Dr. Belden who was called in, found her struggling to get out of bed, complaining very much at the same time of pain in the left side of the head. Her face was flushed, head hot, eyes closed, and her pulse much excited. Attributing the attack to the presence of undigested food in the stomach, Dr. Belden gave her an active emetic, which brought away a large quantity of green currants, after which she became more quiet, and soon fell into a natural sleep, from which she did not awake until morning; when she was totally unconscious of every thing that had passed during the night, and could scarcely be persuaded that she had not slept quietly the whole time. After the lapse of nearly a month she was attacked with a second paroxysm, during which after several attempts to keep her in bed, it was determined to suffer her to take her own course, and watch her movements. Released from constraint she dressed herself, went down stairs, and proceeded to make preparations for breakfast.

"She set the table, arranged the various articles with the utmost precision, went into a dark room and to a closet at the most remote corner, from which she took the coffee-cups, placed them on a waiter, turned it sideways to pass through the doors, avoided all intervening obstacles, and deposited the whole safely on the table.

"She then went into the pantry, the blinds of which were shut, and the door closed after her. She there skimmed the milk, poured the cream into one cup and the milk into another without spilling a drop. She then cut the bread, placed it regularly on the plate, and divided the slices in the middle. In fine, she went through the whole operation of preparing breakfast with as much precision as she could in open day; and this with her eyes closed, and without any light except that of one lamp which was standing in the breakfast room to enable the family to observe her operations. During the whole time she seemed to take no notice of those around her, unless they purposely stood in her way, or placed chairs or other obstacles before her, when she avoided them, with an expression of impatience at being thus disturbed.

"She finally returned voluntarily to bed, and on finding the table arranged for breakfast when she made her appearance in the morning, inquired why she had been suffered to sleep, while another had performed her duty. None of the transactions of the preceding night had left the slightest impression on her mind—a sense of fatigue the following day being the only evidence furnished by her conciousness in conformation of the testimony of those who saw her."

After this the paroxysms became more frequent, a week seldom passing without two or three, but she was not always precisely similarly affected.

"Sometimes she did not leave her room, but was occupied in looking over the contents of her trunk, and arranging the different articles of dress. She occasionally placed things where she could not find them when awake, but some circumstances induced the belief that the knowledge of their situation was restored to her in a subsequent paroxysm. In one instance she disposed of her needlebook where she could not afterwards discover it; but after some time had elapsed, she was found one night in her chamber, sewing a ring on the curtain with a needle which she must have procured from the lost book.

"The entire paroxysm was sometimes passed in bed, where she sung, talked, and repeated passages of poetry. Once she imagined herself at Brattleborough, spoke of scenes and persons with which she was acquainted there, and described the characters of certain individuals with great accuracy and shrewdness, and imitated their actions so exactly as to produce a most comical effect. At this time she denied ever having been at Springfield, nor could she be made to recollect a single individual with whom she was acquainted here, except one or two whom she had known in Brattleborough. Even the name of the people with whom she lived seemed unfamiliar and strange to her.

"Generally her conceptions relative to place were, to a certain extent, correct—those relating to time were very commonly inaccurate. She almost invariably supposed it was *day;* hence her common reply when reminded that it was time for her to retire, was, 'What! go to bed in the day time?' And when I say her notions relative to place were in accordance with fact, the statement requires considerable limitation. She very frequently imagined herself in a different room from the one where she actually was, and almost always in the room which she usually occupied when awake.

"Still her *movements* were always regulated by the senses, and not by her preconceived notions of things. Her chamber was contiguous to a hall, at one extremity of which was the staircase. At the head of the stairs was a door which was usually left open, but which was once closed after she was asleep, and fastened by placing the blade of a knife over the latch. On getting up, she rushed impetuously from her room, and without stopping, reached out her hand before she came to the door, seized the knife, and throwing it indignantly on the floor, exclaimed, 'Why do you wish to fasten me in?'

"Without entering into minute detail, I will only mention some of the most remarkable circumstances which occurred at this early period of the complaint.

"Allusion has been made to her sewing in the dark, and circumstances render it almost certain that she must at that time have threaded her needle also. Some time after this occurrence she conceived the plan, during a paroxysm, of making a bag, in which, as she said, to boil some squash. She was then seen to thread a needle in a room in which there was barely light enough to enable others to perceive what she was about, and afterwards, the same night, she was seen to do it with her eyes closed. In this condition she completed the bag, and though a little puckered, as she observed, it still answered very well to boil the squash in.

"In one instance she not only arranged the table for a meal, but actually prepared a dinner in the night, with her eyes closed. She first went into the cellar in the dark, procured the vegetables, washed each kind separately, brought in the wood and made a fire. While they were being boiled, she completed the arrangements of the table, and then proceeded to try the vegetables to ascertain whether they were sufficiently cooked. After repeated trials, she observed the smallest of them were done—she took them up, and after waiting a little, said the rest would do, and took them up also. They were actually very well cooked. She then remarked that S., a little girl in the family, ate milk, and procured a bowl for her—she also procured one for herself and ate it. As the family did not seat themselves at table, she became impatient, and complained that the men never were ready for their dinner. While engaged in her preparations, she observed a lamp burning in the room, and extinguished it, saying 'she did not know why people wished to keep a lamp burning in the day time.' On being requested to go to bed, she objected, alleging, as a reason, that it was day; but was persuaded to do so by being reminded that she was not well, and that sleep would relieve her head. In the morning she appeared as usual, totally unconscious of the transactions of the preceding night.

"At first, the paroxysms occurred only in the night, and generally soon after she went to bed. As the disease advanced, they commenced earlier—she then fell asleep in the evening, sitting in her chair—or rather passed into the state of somnambulism; for her sleep, under these circumstances, was never natural. At a still later period, the attack took place at any hour during the day or evening. After she began to be affected in the day time, the fit seldom commenced when she was in bed; and even when she retired, as she often did, in this state, she usually remained quiet till the paroxysm subsided—though at times she continued to talk and sing. Sometimes she suffered two distinct paroxysms in one day."

The following is the general description as given by Dr. Belden, of the paroxysms during that period of the disease in which the extraordinary acuteness of vision was manifested—after this was lost, most of the other symptoms were less marked, and many of them disappeared entirely.

"The state of somnambulism was usually preceded by a full, heavy, unpleasant feeling in the head—sometimes by head-ache, ringing in the ears, cold extremities, and an irresistible propensity to drowsiness, attended with a feeling as if weights were appended to the eyelids. There was almost always a slight contraction of the eyebrows, the cheeks were flushed, and sometimes tinged with a crimson hue. By great exertions, the fit might be put off for hours after the appearance of these symptoms; but, in order to gain this reprieve, it was necessary for her to walk, or be engaged in some active employment. The most effectual preventive was exposure to the open air. The moment these precautions were relaxed, and sometimes even in the midst of her active duties, she experienced what she described as a sense of rushing to the head, attended with a loss of the power of speech and motion. If in this state she was immediately carried into the open air, the fit was often arrested; but if this was delayed a moment too long, she lost all recollection, and could not by any efforts be aroused. To a spectator she appeared like a person going quietly to sleep. Her eyes were closed, the respirations became long and deep, her attitude, and the motions of her head, resembled those of a person in a profound slumber. During the fit, the breathing, though sometimes natural, was often hurried, and attended with a peculiar moaning sound, indicative of suffering. At times the pulse was accelerated, but generally it did not vary much from the natural standard. I have remarked, that in her first paroxysm the head was hot, but such was not commonly the case, nor was there any peculiar throbbing of the temporal arteries—the hands and feet, however, were almost invariably cold.

"Her manner differed exceedingly in different paroxysms. Sometimes she engaged in her usual occupations, and then her motions were remarkably quick and impetuous—she moved with astonishing rapidity, and accomplished whatever she attempted with a celerity of which she is utterly incapable in her natural state. She frequently sat in a rocking-chair, at times nodding, and then moving her head from side to side with a kind of nervous uneasiness, the hand and fingers being at the same time affected with a sort of involuntary motion. In the intervals of reading or talking, and even when engaged in these very acts, her nods, the expressions of her countenance, and her apparent insensibility to surrounding objects, forced upon the mind the conviction that she was asleep. Occasionally she was cheerful, disposed to talk, and willing to exercise her powers; the greater part of the time she was irritable and petulant. Pain in a circumscribed spot on the left side of the head was, I believe, always an attendant on the paroxysm, and frequently occasioned a degree of suffering almost beyond endurance. To this spot she invariably pointed as the seat of her agony when she repeated the expression, "it ought to be cut open, it ought to be cut open." Occasionally the whole system was thrown into agitation, and she presented the appearance of a person in a violent fit of hysterics.

"Her eyes were generally closed, but at times they were stretched widely open, and the pupil was then very considerably dilated. These different states of the eye seemed to occasion no difference in the power of seeing—she saw apparently as well when they were closed as she did when they were open. In the day time she always had the eyes covered with a bandage during the paroxysm, nor would she allow it to be removed for a single moment, unless the room was unusually dark. In order to test the sensibility of the eye, I took one evening a small concave mirror, and held it so that the rays proceeding from a lamp were reflected upon her closed eyelid. When the light was so diffused that the outline of the illuminated space could scarcely be distinguished, it caused, the moment it fell on the eyelid, a shock equal to that produced by an electric battery, followed by the exclamation, 'why do you wish to shoot me in the eyes?' This experiment was repeated several times, and was always attended with the same result. It was also tried when she was awake, and the effect, though less striking, was very perceptible. The same degree of light thrown on my eyelids, occasioned no pain.

"How far she was sensible to the presence of surrounding objects, it is very difficult to determine; indeed, facts seem to prove that she was not, in every paroxysm, alike in this respect. In the early stage of her complaint, she appeared to take little notice of persons, unless they were connected with her train of thought, and then she regarded those with her only as the representatives of the persons whom she imagined to be present. Nor did the sight or the hearing have any tendency to correct the false impression. Thus, in her first paroxysm, she regarded me as her father, and continued to do so as long as I remained with her; but, in her subsequent fits, this idea was never revived. Her conception of persons was generally made to correspond with the idea of the place in which she conceived herself to be. She was in the habit, when well, of spending her evenings in the room with the children of the family, and it was in their company that she often imagined herself to be during the paroxysm. The questions which were at these times proposed to her to test her powers of vision, were cheerfully and readily answered, because they were questions which it was natural for children to ask; or, at least, she supposed them to proceed from children. Much that she said was also directed to them, though it was evident, at times, her conceptions and perceptions were strangely intermingled. In a paroxysm, soon after the arrival of her father, he asked her a question which she answered by addressing a little boy belonging to the family, who was not then in the room; but his knife which he placed in her hand, she immediately recognised as her father's, and wondered how that came to be in Springfield while he was in Brattleborough. At a later period of her complaint; she appeared to comprehend more of what transpired in her presence, and accordingly she obstinately refused to read cards, or submit to experiments of any kind. These trials she then evidently regarded as so many attempts to impose upon her; and in adopting this conclusion she reasoned with perfect consistency; for if she actually could see as she appeared to—if to her vision, night was converted into day, and darkness into light, while she was unconscious of any thing peculiar to herself, what could be more annoying than to be constantly teased with questions which to her senses were perfectly obvious? If a request were made of her which appeared reasonable, especially if it related to her customary duties, she really did whatever was required.

"There is abundant evidence that she recollected, during a paroxysm, circumstances which occurred in a former attack, though there was no remembrance of them in the interval. A single illustration will suffice, though many more might be given. In a paroxysm, a lady who was present placed in her hand a bead bag which she had never before seen. She examined it, named the colours, and compared them with those of a bag belonging to a lady in the family. The latter bag being presented to her in a subsequent paroxysm, the recollection of the former was restored--she told the colours of the beads, and made the same remarks respecting the comparative value of the two bags that she had done before. I had taken measures to satisfy myself in the interval that she then remembered nothing of the first impression.

"Attempts to rouse her from this state were uniformly unsuccessful. She heard, felt, and saw; but the impressions which she received through the senses had no tendency to waken her. A pailful of cold water was in one instance thrown upon her; she exclaimed, 'Why do you wish to drown me!'—went to her chamber, changed her dress, and came down again. Large doses of laudanum were sometimes given her with a view to relieve her pain—it appeared to mitigate her sufferings, and she was observed uniformly to wake soon afterwards. Excitements of every kind, and particularly attempts to draw forth her peculiar powers, invariably prolonged the fits, and generally aggravated the pain in the head.

"At the termination of a paroxysm, she sunk into a profound sleep. The frown disappeared from her brow, the respirations again became long and deep, and the attitude was that of a person in undisturbed slumber. She soon began to gape and rub her eyes, and these motions were repeated after short intervals of repose. In the course of fifteen or twenty minutes from the first appearance of these symptoms, she opened her eyes, when recollection was at once restored. She then invariably reverted to the time and place at which the attack commenced, and in no instance, when under my care, manifested any knowledge of the time which had elapsed, or the circumstances which transpired during the interval.

"These paroxysms were very obviously connected with the state of the stomach and digestive organs. Though the appetite was generally good, food often occasioned oppression, and she not unfrequently raised a considerable portion of what she ate. She also had head-ache, acidity of stomach, and most of the symptoms usually termed dyspeptic. These circumstances had not indeed attracted much attention till after the occurrence of the paroxysms; but I then found that they had existed, in a slight degree, for some time, and that lately her sufferings from this source had been very considerably aggravated. Improper food, and other causes affecting the stomach directly, I am confident, in several instances, occasioned an attack. The very first paroxysm occurred a few hours after she had eaten a large quantity of green currants; and two or three times afterwards, a paroxysm was occasioned by medicine which disturbed the stomach.

"During the fit she very often called for food, particularly for apples; but she seldom woke as soon as usual, after having gratified her appetite. At a time when she had invariably one or two paroxysms daily, I gave her an emetic, and afterwards allowed her to take but a small quantity of the simplest food; under this course she had but one slight attack for five days, and she was in every respect much better. The paroxysm which she had in this instance occurred also under circumstances illustrative of the nature of the complaint. It came on in the stage, when she was on the way to Worcester, and was preceded by sickness, to which she is very subject when riding in a close carriage."

The family in which Jane lived were early convinced from the confidence with which she moved, and the facility with which she always avoided obstacles, that she saw both when her eyes were closed and in the dark, but no experiments were instituted to determine the fact until the evening of the 10th of November, when it was proposed to ascertain whether she could read with her eyes closed.

"She was seated in a corner of the room, the lights were placed at a distance from her, and so screened as to leave her in almost entire darkness. In this situation she read with ease a great number of cards which were presented to her, some of which were written with a pencil, and so obscurely, that in a faint light no trace could be discerned by common eyes. She told me the date of coins, even when the figures were nearly obliterated. A visitor handed her a letter, with the request that she would read the motto on the seal, which she readily did, although several persons present had been unable to decipher it with the aid of a lamp. The whole of this time the eyes were, to all appearance, perfectly closed.

"The second day after this exhibition of her power, she fell asleep in the morning in the act of procuring water from the pump. This was her first attack in the day time. Soon after, on going out of doors, she observed to her companion, 'what a beautiful day it is, how bright the sun shines!' It was in fact quite cloudy. When asked by one of the ladies of the family to thread a needle, she refused, saying, 'you can do it for yourself.' Soon after, she went into a neighbouring house, where there was an elderly lady to whom she often rendered this kind of assistance. This lady said, 'Jane, I am old, and cannot see very well, will you thread my needle for me?' She immediately complied with the request, and threaded the needle not only at that time, but once or twice afterwards. She awoke from this paroxysm in the afternoon, and was quite distressed to find the fits beginning to affect her in the day time.

"The next morning she fell asleep while I was prescribing for her, and her case having now excited considerable interest, she was visited during that and the following day by probably more than a hundred people. To this circumstance, undoubtedly, is to be attributed the unprecedented length of the paroxysm: for she did not awake till Friday morning, forty-eight hours after the attack. During this time she read a great variety of cards written and presented to her by different individuals, told the time by watches, and wrote short sentences.

"For greater security, a second handkerchief was sometimes placed below the one which she wore constantly over her eyes, but apparently without causing any obstruction to the vision. She also repeated with great propriety and distinctness several pieces of poetry, some of which she had learned in childhood, but had forgotten, and others which she had merely read several years since without having ever committed them to memory. In addition to this she sung several songs, such as 'Auld Lang Syne' and 'Bruce's Address to his Army,' with propriety and correctness. Yet she never learned to sing, and never has been known to sing a tune when awake. She was evidently very much exhausted by these efforts, and at times her sufferings were so extreme that she could not be induced to answer any questions.

"On Wednesday, November 20th, I took a large black silk handkerchief, placed between the folds two pieces of cotton batting, and applied it in such a way that the cotton came directly over the eyes, and completely filled the cavity on each side of the nose—the silk was distinctly seen to be in close contact with the skin. Various names were then written on cards, both of persons with whom she was acquainted, and of those who were unknown to her, which she read as soon as they were presented to her. This was done by most of the persons in the room. In reading she always held the paper the right side up, and brought it into the line of vision. The cards were generally placed in her hand for the purpose of attracting her notice, but when her attention was excited she read equally well that which was held before her by another. I do not know that she ever read cards which *she had never seen*, when only the back was presented to her.

"Being desirous, if possible, to prove that the eye was actually closed, I took two large wads of cotton, and placed them directly on the closed eyelid, and then bound them on with the handkerchief before used. The cotton filled the cavity under the eyebrow, came down to the middle of the cheek, and was in close contact with the nose. The former experiments were then repeated without any difference in the result. She also took a pencil, and, while rocking in her chair, wrote her own name, each word separately, and dotted the i. Her father, who was present, asked her to write his name. 'Shall I write Little Billy or Stiff Billy,' was her reply, imagining that the question was proposed by a little boy of the name of William belonging to the family. She wrote *Stiff Billy*—the two words without connexion, and after writing them both, she went back and dotted the i in each. She then wrote *Springfield* under them, and after observing it a moment, smilingly remarked that she had left out a letter, and inserted the l in the proper place.

"A watch enclosed in a case was handed to her, and she was requested to tell the time—after examining both sides, she opened the case, and then answered the question. Afterwards, but in the same paroxysm, a gentleman present wrote his name in characters so small that no one else could distinguish it at the usual distance from the eye. As soon as the paper was put into her hand, she pronounced the name. It was thought that any attempt to open the eye would be indicated by the contraction of the skin on the forehead, but though she was closely watched, nothing of the kind was observed.

"She also at this time repeated poetry and sung, as before. This she did almost every paroxysm; and though there are some pieces which she must have repeated in this way scores of times, her knowledge of them when she is awake is not in the least improved by the practice. These experiments were performed in the presence of several of the most respectable and intelligent gentlemen in town, and they were all convinced there could be no deception.

"While she was in a paroxysm a few evenings afterwards, the lights were removed from her room, and the windows so secured that no object was discernible. Two books were then presented to her which had been selected for the purpose; she immediately told the titles of both, though one of them was a book which she had never seen before.

"Monday, Nov. 25th, she was removed to my house; but, though she had several paroxysms in the interval, nothing worthy of notice occurred till the 30th. The morning of that day, as she was engaged in her customary employments, she complained suddenly of dizziness, seated herself in a chair, and immediately became insensible. Soon after, she applied a bandage to the eyes, went to her chamber and changed part of her dress. She then came down, and taking a basket which she had purchased the day before, and which was much soiled, remarked that it was dirty, and she would wash it. This operation she performed with as much neatness and despatch as she could have done when awake.

"The room in the front part of the house she had never seen except for a few moments several months since. The shutters were closed, and it was so dark that it was impossible for any one possessing only ordinary powers of vision to distinguish the colours in the carpet. She, however, though her eyes were bandaged, noticed and commented on the various articles of furniture, and pointed out the different colours in the hearth rug. She also took up, and read several cards which were lying on the table. Soon after, observing her with a skein of thread in her hand, I offered to hold it for her to wind. She immediately placed it on my hands, and took hold of the end of the thread in a manner which satisfied me she saw it, and completed the operation as skilfully and readily as if she were awake. Having left the room a moment, I found her on my return with her needle threaded, and hemming a cambric handkerchief. She however soon abandoned her work, and was then asked to read a little while aloud. Bryant's Poems were given to her; she opened the book, and turning to the 'Thanatopsis,' read the whole, (three pages,) and the most of it with great propriety. Something being said about her manner of reading, she observed there were parts of the piece which she did not understand, that she could read it much better if she understood it. The day before, she had procured several *samples* of calico at the shops, portions of some of which had been washed since the commencement of her paroxysm. On their being spread out before her, she not only told the shop at which she obtained each, and named its price, but compared the part which had been washed with the piece from which it was taken, and when there was any change, pointed out the difference.

"A coloured girl came in and seated herself before her: she was asked if she knew that lady; she smiled, and returned no answer. Some one said, 'She has a beautiful complexion, has she not?" Jane laughed heartily, and said, 'I should think she was somewhat tanned.'

"At dinner she took her seat at the table as usual, helped herself to bread when it was offered, presented her tumbler for water, and through the whole time, did not, by her manner or actions, betray the least want of sight. After dinner the bandage which she put over her eyes in the morning, and which she had worn ever since, was taken off, and in its place a black silk handkerchief stuffed with cotton was bound on so as to fit accurately to the nose and cheeks. Though extremely reluctant on account of severe pain in the head, she was at length prevailed on to write a part of the 'Snow Storm,' one of the pieces which she is in the habit of repeating when asleep. She finished one stanza of six lines, and part of a second. In writing she followed for a time the ruled lines placed under her paper, but they having been displaced, she proceeded without them, continuing, however, nearly in a straight line. In one or two instances she failed to make a proper division of the poetry into lines, and several times misspelled words which she would not have done had she been awake. Twice she noticed the inaccuracy in the spelling, and corrected it at the time, but when writing the same words afterwards she fell into a similar error. A person standing behind her very carefully interposed a piece of brown paper between her eyes and the paper on which she was writing. Whenever this was done she appeared disturbed, and exclaimed, 'don't, don't.' For some time I watched her narrowly to ascertain whether the bandage was constantly in place, but I could detect no change in its position.

"A watch was presented to her, the face of which was concealed by a piece of brown paper placed between it and the chrystal. Instead of telling the time, she observed, 'Any thing but a paper watch!'

"In the evening, when the room was so dark that nothing but the position of the windows could be discerned by common eyes, a blue fancy handkerchief was placed before her, and she was asked if she did not wish for a beautiful pink handkerchief—she replied, 'I hope I know blue from pink.'

"The next day, during a paroxysm, she went into a dark room and selected from among several letters, having different directions, the one bearing the name which she was requested to find. She was heard to take up one letter after another and examine it, till she came to the one for which she was in search, when she exclaimed, 'Here it is,' and brought it out. She also, with her eyes bandaged, wrote of her own accord two stanzas of poetry on a slate; the lines were straight and parallel.

"One circumstance I have omitted to mention, which is, the power of imitation which she occasionally exhibits. This extends not only to the manner, but to the language and sentiments of the persons whom she personifies: and her performances in this way are so striking, and her conceptions of character so just, that nothing can be more comical.

"This, like her other extraordinary powers, is confined to the somnambulist state—at other times she does not exhibit the slightest trace of it."

Jane's disease being manifestly aggravated by the constant trials of her peculiar powers, she was removed to the hospital in Worcester on the 5th of December, 1833. The following abstract from the record book of this institution exhibits the progress of the case, and confirms the observations relative to her remarkable powers of vision.

"Jane had no paroxysm till the evening of December 6th, the day after her admission. 'Immediately after falling asleep she began to breathe with difficulty, her mind seemed to labour, and she was uneasy and in perpetual motion. She said nothing till questions were asked her. She told the time of day by a watch, in the dark, with her eyes closed—the fire was not extinguished, and of course it was not entirely dark. Her pulse was 72 in a minute, and without irritation. She answered questions regularly, but with an air of impatience; and said 'they kept asking her to read, but she would not.' She declared she would not go to Worcester, and said she was at Mr. Stebbin's in Springfield. Afterwards she complained she was locked up in the hospital, and did not wish to stay, and that she would not have come here if she had expected to be locked up. One hour and a half after the commencement of the paroxysm, her feet was placed in a bath of the nitro-muriatic acid. In five minutes she became calm, and went into a quiet sleep: in a few minutes more she waked very pleasant.'

"From this time till the 13th, she had from one to three paroxysms daily; in some of which 'she repeated passages of poetry very sweetly; sung some tunes with correctness; and, with her eyes bandaged, walked about the house, and from room to room, without inconvenience.' Many of these paroxysms, the Doctor observes, he is now satisfied were occasioned by improper food, particularly by the free use of fruit.

"'*Dec.* 13. Jane had a more interesting paroxysm than at any time before since her residence in the hospital. In a paroxysm the day previous, she lost a book which she could not afterwards find. Immediately on the access of the paroxysm to day, she went to the sofa, raised the cushion, took up the book, and commenced reading. She read two or three pages to herself. Her eyes were then covered with a white handkerchief folded so as to make eight or ten thicknesses, and the spaces below the bandage filled with strips of black velvet. She then took a book and read audibly, distinctly, and correctly, nearly a page. It was then proposed to her to play backgammon. She said she knew nothing of the game, but consented to learn it. She commenced playing with the assistance of one acquainted with the moves, and acquired a knowledge of the game very rapidly. She handled the men and dice with facility, and counted off the points correctly. Had another paroxysm in the afternoon in which she played a number of games of backgammon, and made such proficiency that, without any assistance, she won the sixth game of Dr. Butler, who is an experienced player. Knowing her to be a novice, he suggested several alterations in her moves—these alterations she declined making, and the result showed the correctness of her judgment. The Doctor, a little mortified at being beaten by a sleeping girl, tried another game, in which she exerted all his skill. At its close she had but three men left on the board, and these so situated that a single move would have cleared the whole. While she was engaged in this game, an apple was taken from a dish, in which there were several varieties, and held before her, but higher than her eyes. On being asked its colour, she raised her head, like a person who wished to see an object a little elevated, and gave a correct answer to the question. In the lucid interval, half an hour after she awoke from the paroxysm, it was proposed to her to play backgammon. She observed she never saw it played, and was wholly ignorant of the game—on trial it was found she could not even set the men.'

"'*Dec.* 15. Paroxysm rather singular. She is full of mischief like a roguish child—is very pleasant all the while, but will not read. At twilight her eyes were more open than common, but she insisted she could not see. Ate too heartily and felt sickness at stomach.'

"'*Dec.* 16. Has been different in the paroxysms to-day. She opens her eyes and declares she cannot see, when they are shut. When reading, I placed my fingers on her eyes—she said immediately it was total darkness, and she could not read a word. The fact that her eyes are open in the paroxysms proves that they are less susceptible to light, and of course that her vision is less acute. At dinner her eyes were open, and all the family supposed her awake; but she declared in the evening she had not the least recollection of dining, of seeing some friends, or of witnessing a catastrophe in the gallery which disturbed the whole family, and in which she was much interested at the time.'

" '*Dec.* 18. In the paroxysm this evening her eyes are open, and she appears, in all respects, like a person awake; yet her manner is very different from that which she usually exhibits. She evidently has lost her former acuteness of sight—she protests she can see nothing when blinded, and will not attempt the least thing.'

" '*Dec.* 19. During the whole day the appearance was the same as on previous days, excepting her mind was more tranquil, and she was more disposed to melancholy. She once said her head ached, and felt strangely. She appeared very much like a person insane. I gave her a letter about four o'clock, which she read, and remarked that she did not know that her friends expected her to write to them. At nine o'clock she was asked if she had seen a letter from Springfield; she denied that she had, but recollected circumstances which transpired yesterday; and, in this respect, was different from what she usually is during the paroxysm. A stranger would say, you have got an odd or insane girl, but would suspect nothing more. My family disagreed about the time of her coming out of the paroxysm; one thought she was out of it when others thought not.'

" '*Dec.* 21. Very well, and wakeful all day, but in the evening had a paroxysm of complete insanity: talked, ran about the house, and refused to take her medicine. When forced to take it she shed tears, and fell into a sort of hysterical sobbing, which lasted some minutes.'

" '*Dec.* 24. Had a paroxysm in the evening, in which she played backgammon: at first her eyes were closed, afterwards wide open. She said she could not read a word or see at all when blinded. Lately her face has been less flushed, and her head less painful.'

" '*Dec.* 30. In a paroxysm to-day she wrote the following letter to her aunt. She afterwards remembered that she had written a letter, but could not recollect its contents.'

" DEAR AUNT,

" I feel that it is my duty to write to you, and inform you of my situation, as it is a very critical one. I received a letter from father yesterday, saying he had not written to you, and wished me to do so. I thought I would try. Perhaps you will wonder how I came to Worcester Hospital—but it is for my health. As I prize that above every thing else, I was willing to deny myself a great many pleasures only for a few months. I left home last April, and went to Springfield with a young lady of my acquaintance, and liked there so well that I concluded to stay and spend the summer. While there I was attacked with the disorder that has brought me to the hospital. The first attack was in June. It was about ten in the evening—the people called a physician; he thought it was partial derangement, and gave me an emetic that stilled me a little, and I got over it, and the next day was quite well. The people thought it was a very strange disorder, and let it pass off. But I was troubled almost every week with the same disorder, and it soon became something serious. I found I was growing worse every day, and was put under the physician's care. Medicine did not seem to have any effect, and I was still growing worse. In October I was attacked in the day time. It was Tuesday morning, and it continued till Friday morning, when I went into a natural sleep, and awoke up and knew nothing of what had passed. I will not try to give you any description of what I did, as I presume you have read it in the newspapers, as my case was the one referred to, and I think the pieces are not exaggerated in the least.

" Father was sent for when I was in one of my turns, as I do not know what else to call them, and reached Springfield in about 48 hours; and an hour after I came out of it. He expected to take me home with him; but I was taken the next morning, and continued so most of the time he was in Springfield. He said it was no place for me at home, and there must be something done. They then concluded to bring me here, as people thought if I could be cured any where it would be here; and I am happy to say I am much better than I was when I came here. I have been here about a month, and I think I shall be entirely well in two months more, as my turns are not near as often, and no two have been alike. The people of Springfield were so much interested for me, that they offered to pay my board here until I was well; so the night I left Springfield I had a present of forty-eight dollars."

"In the evening of the day on which she wrote the letter she had a very distressing paroxysm, which was followed by a mild form of fever which lasted several days."

"'*Jan.* 10. Did not feel well all day yesterday—had confusion of head and flushing of face. At evening she had a paroxysm in which she recollected all that was done in the day; and after the paroxysm all that was done in it. It lasted but half an hour, when she went into a quiet sleep and slept till morning.'

"'*Jan.* 11-13. Had slight paroxysms in which consciousness was not lost—recollected in the paroxysms what transpired in the interval, and in the interval the circumstances of the paroxysm—is greatly inclined to indulge in eating, and if she eats freely is unusually dull and sleepy afterwards.'

"'*Jan.* 19. Has had one or two paroxysms since the 13th similar to those last described. In the one to-day she repeated the 'Pilgrim's Fathers' very distinctly and correctly. I had censured her for eating fried cakes and the like between meals; and she kept a fast during the paroxysm to-day, but called for pancakes, which she said might be eaten with impunity on fast-days.'"

During a recent visit to Worcester, Dr. Belden had an opportunity of witnessing the improvement in the health of his patient.

"Her face has lost the flush which it used habitually to wear—the head is now seldom painful, and there is no tenderness at the spot formerly affected, and the natural, healthful temperature of the extremities has been restored. There is still some oppression after eating, especially if she deviates from the regulations which have been prescribed respecting her diet; and any gross violation is almost certain to be followed by a paroxysm. Strong mental emotion too, or any kind of mental or physical excitement, conduces to the same effect; and, sometimes, is of itself sufficient to occasion a fit. In a paroxysm which occurred while I was there, the eyes were open and appeared nearly natural—the pupil was, perhaps, a little more dilated than common. Her manner was hurried—the speech and motions rather quick and abrupt. She appeared to be sensible of every thing which took place around her,—knew me, and answered my questions with propriety and correctness; and, so far as I could discover, had a proper conception of the relations of time and place. A handkerchief having been tied over her eyes she declared she could not see at all—said that it was perfect darkness to her. During the whole time her perceptions appeared to be more quick and vivid than natural. Her remarks, as in the earlier periods of her disease, were often distinguished for a degree of wit and brilliancy peculiar to these occasions. She also, at this time, sung as she formerly did. In the paroxysm she recollected circumstances which transpired a short time before, but did not, the next day, remember what occurred in the fit. The termination of the paroxysm is often less distinct than it formerly was, though the access, I believe, continues to be well marked."

The latest intelligence we have of the case is contained in the following extract of a letter from Dr. Woodward to Dr. Belden.

"Jane's paroxysms have ceased altogether for the last nine days, and she is in good health, excepting a distress after taking food. She has never appeared so cheerful, and in so good spirits, since her residence with us. During most of last week she did the duty of an assistant in the absence of one of our attendants, and she has done more or less work in the halls every day. During the last paroxysm I applied leeches to her head. She waked during the paroxysm not a little surprised at her new *head ornaments*."

Such is the history of this remarkable case, which we have presented in all its details, conceiving them as we do to possess extreme interest. We have not considered the question of imposture in the case, entertained by some who are ignorant of physiology and of the records of medicine, because we really entertain no suspicion of deceit. Independent, in this case, of the care with which the facts appear to have been observed, the respectability of the witnesses, the character of the patient, the nature of the facts observed precluding the idea of imposition, and the analogous cases in medical records, there appears to us nothing so unprecedented as to excite our incredulity. Physiology, indeed, clearly points to an excited state of certain portions of the brain, as offering an explanation of most of the remarkable phenomenon of the case.

We placed a handkerchief eight times folded over the eyes of a medical friend, who expressed his disbelief in the possibility of any object being discernible through such an envelope, and to his surprise he could distinguish the position of the windows, and on a subsequent occasion the light of a lamp in the room. Now, the retina and cerebral organs of our friend were in a normal condition, and if in this state he could distinguish the light through so many folds of linen, it seems little extraordinary that an individual whose cerebral organs of vision are in a state of extreme excitement should be capable of distinguishing objects much more distinctly. Light and darkness are but comparative terms. It is familiar to every one that a person on entering a room dimly lighted will pronounce it perfectly dark, and yet in a few minutes be able to distinguish minute objects. Persons long confined in dungeons so dark that the visitor pronounces that no ray of light enters, have after a time been enabled to distinguish objects, and even to watch the movements of minute insects; as of spiders, &c. Nor is the fact less familiar to the physician, that patients labouring under retinitis will complain of the light, and even severely suffer from it in a room which to a healthy eye seems totally dark.

We may call attention also to the extraordinary acuteness of the other senses in certain individuals, as of the sense of hearing and of touch in the blind; and still more so in those labouring under inflammation of the auditory and tactile organs. The case of Caspar Hauser furnishes us also with evidence of an acuteness of some of the senses quite as surprising as occurred in the one under notice. There appears to us, then, nothing incredible in what has excited most surprise in Jane's case, her acuteness of sight, and although we cannot so satisfactorily explain all the other phenomena, this does not afford sufficient ground for disbelief, inasmuch as they are not in opposition to any of the established laws of nature.

There are innumerable other phenomena equally extraordinary and inexplicable, and which no one questions, but which only cease to excite our surprise because of their frequent occurrence—as intermittence in fevers, the perfect regularity of the paroxysms, &c.

XVIII. *Clinical Observations on the Constitutional Origin of the various Forms of Porrigo, commonly known by the names of Scald-head, Tinea, Ring-worm, &c. With Directions for the more Scientific and successful Management of this usually obstinate class of Diseases by a Treatment consisting of an Appropriate Modification of the Principles first particularly promulgated by Mr. Abernethy.* By George Macilwain, Surgeon to the Finsbury Dispensary, St. Ann's Society, and late Surgeon to the city of London Truss Society. London, 1834.

A thin octavo of 83 pages, heavily leaded and amply margined,—a volume which will not call forth from the reader the trite adage of *multum in parvo.* The author inculcates the necessity of a mild diet in the treatment of porrigo; and as every physician called upon to prescribe for the same affection recommends the same thing, no one will be inclined to dispute this point with him. Occasional mild purgatives, keeping the head shaved, and the application to it of weak red precipitate ointment, constitute the sum of the medical, general, and local treatment. In all this there is certainly nothing new; neither do we perceive any thing novel in his views relative to the philosophy of the disease. We have been a little puzzled by some of his passages, of which the following may serve as a specimen. Upon the subject of the varieties of porrigo, all of which he conceives are to be relieved by a similar treatment, he observes—

> "Modifications in the treatment are certainly required; these, however, result, not from any difference in the local characters of the complaint, but from the variations which occur in the seat, and in the indications of the general disorder by which they are accompanied, to which may be added those obviously suggested by difference of age, and certain constitutional peculiarities."

We shall cite another example of carelessness in writing. In regard to the tate of the stomach in porrigo, he observes—

> "I have not often found it necessary to interfere *medically* with this organ, further than in the correction of voracious appetite, which sometimes exists in such a degree, as greatly to irritate the nervous system. I believe that this would, in many cases, gradually subside under the influence of a rational diet alone; but its relief is much expedited by the administration of small doses of ipecacuanha or antimony—one grain of the former, or two or three grains of the latter, may be given every night with half a grain of calomel and the rhubarb, with great advantage."

Here the "two or three grains of the latter," should certainly allude to the ipecacuanha, and not the tartrite of antimony, as expressed. Following the advice of the text might occasion some inconvenience to a child or person with a very feeble stomach.

The following passage deals in those "elementary truisms" for which the author is distinguished. In cases where worms exist in the alimentary canal, he observes, that he trusts to repeated small doses of aloes and calomel.

> "I prefer these, because, as it appears to me, I not only produce the discharge of these animals with certainty, but they do not so readily again make their appearance. We know but little about these animals; but could we discover it, the object in treating them is evidently not only to procure their expulsion, but to correct, at the same time, the morbid condition which favours their production, and on which it may possibly depend."

Mr. Macilwain's little book is, however, by no means a bad one. The practice it inculcates is not only simple and safe, but calculated to be efficacious. He deserves special commendation for one thing, namely, dispensing with the farrago of ointments and washes usually recommended in the treatment of the forms of porrigo, some of which are exceedingly dirty and disgusting, especially such as contain tar and sulphur. That many of the local applications often recommended are not only useless, but positively injurious, we fully believe, being in general too irritating and unsparingly used. The applications or treatment should never be such as would interfere with the healthy functions or conditions of the parts affected, and we fully concur with the author in the opinion, that unnecessary rudeness of manipulation, either in washing, shaving, or drying the head, will each contribute to render the disease more or less obstinate. The following advice upon this subject is highly judicious.

> "The head having been shaved as close as the nature of the case may admit, should be washed with soap and water, until every particle of discharge be removed. The soap should next be entirely washed off by a liberal use of clean tepid water, and the whole surface patted, (not rubbed,) with soft linen until perfectly dry. I generally direct the head to be shaved about twice a week."

The ointment employed, which is generally the red precipitate, made at first of the strength of a drachm to an ounce of lard, and gradually increased, should be applied by means of a moderate sized camel-hair brush—

> "With such an instrument the whole of the affected surface should be, as it were, lightly painted; the ointment having been previously conveniently softened by warmth, so that the diseased parts should appear as if lightly oiled by the application, and nothing more. The dressing should be repeated night and morning, with the same care to cleanse the surface of all matters, including the ointment previously employed. In some instances this frequent dressing seems to produce irritation; when repeating it once in twenty-four hours may be sufficient, especially if the renewal of the discharge be not very rapid or abundant."

We have indulged in a freer notice of this little treatise, from the belief that it will not be republished in this country. G. E.

XIX. *Sul Commercio Sanguigno tra la Madre et il feto Lezione di* TOMMASO BIANCINI, Prosettore e Ripetitore di notomia umana nell' I. E. R. Univer. di Pisa, &c. detta all' Academia Medico-Fisica Fiorentia Nell' adunanza del di 9 Dicembre, 1827. Pisa, 1833. 8vo. pp. 78.

On the Sanguineous Connexion between the Mother and Fœtus. By THOMAS BIANCINI, of Pisa, read before the Medico-Physical Academy of Florence at its Session of December 9th, 1827.

The mode in which the communication is effected between the blood of the mother and that of the fœtus, has given rise to very considerable controversy among the older writers on physiology. Although, even at the present day, our views in relation to the subject are so very imperfect and confused as to amount to almost entire ignorance; yet of late years it has elicited comparatively little attention. It still, therefore, remains one of those points in physiology, upon which the labours of the industrious investigator are calculated to throw much and important light.

The latest publication in relation to this subject, is the one now before us. It consists chiefly of the detail of various experiments undertaken with the view of determining the structure of the placenta, and the mode in which the blood is conveyed from the pregnant uterus to the fœtus, and from the latter back again into the vessels of the mother.

We cannot certainly subscribe to all the views which the author has thrown out in the course of his remarks, a few of which do not appear to us to be clearly proved by the result of his experiments. The work is nevertheless highly interesting, and deserving of a careful and candid perusal.

From his experiments, twenty-four in number, M. Biancini conceives the following conclusions to be legitimately deducible.

1. The umbilical arteries communicate with the veins of the maternal uterus.
2. The communication between these two sets of vessels is effected by means of an intermediate series of large, straight vessels, to which, as they accompany the *utero-placental* arteries, and fulfil the office of transporting the blood, returned from the fœtus and placenta, to the vessels of the maternal uterus, the distinctive name of *placento-uterine veins* may with propriety be applied.
3. The placento-uterine veins are not to be considered as prolongations of those of the uterus; they are, in fact, a new formation resulting from the act of impregnation.
4. The umbilical arteries being continued into the placento-uterine veins, establish a direct communication between the venous blood of the fœtus and that of the uterus of the mother; while the utero-placental arteries, inosculating with the radicles of the umbilical vein, cause a similar communication between the arterial blood of the two.
5. The proper substance of the placenta is composed of ramifications of blood-vessels and a reticulated tissue, and is made up of the ultimate divisions and terminations of the vessels which unite the mother with the fœtus, and vice versa.
6. In the placenta there exists two circulations of blood; one, namely, of the blood proper to its own tissue, and another, of the blood destined for the nourishment of the fœtus. There is no difference, however, between these two portions of blood.
7. The arterial blood supplied from the vessels of the mother is conveyed to the placenta by the *utero-placental arteries*, which anastomose with the radicles of the umbilical vein; which latter performs the office of an artery.
8. One portion of the maternal blood is distributed to the proper tissue of the placenta, by means of the collateral ramifications of the utero-placental arteries and umbilical vein, and another is conveyed into the body of the fœtus by the principal trunk of the latter vessel. The blood, after being circulated through the fœtus, is returned back again to the placenta by the two umbilical arteries which perform the office of veins.
9. The blood, finally, returned from the fœtus, mixed with the blood returned from the placenta by branches of the umbilical arteries and the placento-uterine veins, passes immediately into the veins of the maternal uterus, through the principal trunks of the placento-uterine vessels.

The foregoing views require no comment. The several points in which they differ from the generally received opinions of modern physiologists will be perceived at once by our readers, all of whom are to be presumed conversant with the latter. The truth or falsity of M. Biancini's propositions can be determined only by a series of judicious and cautious experiments. D. F. C.

QUARTERLY PERISCOPE.

FOREIGN INTELLIGENCE.

ANATOMY.

1. *Case of Diverticulum of the Œsophagus.*—A merchant, æt. 54, during a meal, perceived that a mouthful of food, instead of passing on to the stomach, was arrested at a point in the œsophagus. From this time forward he experienced a sensation of pain whenever deglutition was attempted. The affection went on increasing, until the pain experienced after each repast was excruciating; and he was obliged in order to swallow his food, to cause it to regurgitate, and then rechew it, so that he might be said to have become in a degree a ruminant; a sound introduced into the œsophagus indicated the existence of an obstacle in this tube, which it was impossible to overcome. Although the patient swallowed a large quantity of food daily, but a small portion of it passed into the stomach, the rest being rejected after each repast; a large tumour appeared on each side of the larynx, which could be emptied by pressure, their contents being discharged partly into the œsophagus, and partly into the stomach. After nine years of suffering the patient at length died, his death being caused absolutely by hunger and debility.

Autopsy.—Upon dissection the cause of the symptoms manifested during life, was found to be a large pouch or diverticulum, which started from the œsophagus just below the transverse fibres of the inferior constrictor muscle of the pharynx. The orifice of the diverticulum did not equal in diameter the cavity of the œsophagus, but suddenly enlarging, terminated in a pouch three inches nine lines in length, one inch and three fourths in breadth, and about the size of a child's fist. The upper portion of the sac reached as high up as the middle of the thyroid cartilage, whilst the inferior portion extended as low down as the fourth ring of the trachea. The parietes of the sac were of some thickness, and composed of three distinct layers. The external one was cellular, and covered over with well-developed muscular fibres, which passed from the œsophagus to the diverticulum; the second, (mucous,) was thicker than the mucous membrane of the œsophagus and pharynx, and the third was formed by a continuation of the epithelium of the œsophagus. The sac when filled with food, was pushed forward upon the œsophagus, which it closed completely; the resistance offered by the cervical vertebræ to its dilatation posteriorly, being the chief agent in the production of this state of things. It was this which caused his death.—*Gaz. Med. Sept. 28th,* 1833, *from Rust's Mag. Vol. XXIX.*

2. *Case of Epispidia.* By Dr. Cramer.—In the autumn of 1828, during the levy of troops in Wesensee, I had an opportunity of examining a young man of 21, who had a remarkable malformation of the urinary organs. The urethra did not lie in its usual place beneath, but above, the corpus spongiosum, and was divided in its whole length from the arch of the pubes to its extremity: the

penis was of the natural length. The mons veneris was wanting, but in its stead there was a reddish skin, covered with a scaly cuticle, and destitute of hair. Beneath the pubal arch there was an opening, into which a finger might be readily introduced, so as to reach the isthmus. The glans was also divided, and the rudiments of a prepuce were observable about its root. When the margins of the fissure were brought together by pressing them on both sides, they were found to coincide pretty exactly. There was nothing apparently amiss with the scrotum and testes: and the animal passions were energetic, though the young man denied that he had ever had any sexual intercourse. His parents were healthy people, and none of his brothers or sisters ever had any deformity that he was aware of. It should be added, that this person laboured under incontinence of urine; and for the greater convenience of emptying the bladder, was in the habit of generally wearing a petticoat instead of breeches. Does not malformation of this kind belong to the hare-lip and cloven-palate species; and might it not be cured by similar means?—*Med. Gaz. from Hecker's Medicinische Zeitung.*

3. *Congenital Malformation of the Brain.*—M. Deschamps communicated to the Royal Academy of Sciences at their meeting of 2d September last, a description of a case of this kind, different from any hitherto described. The subject of it was a man forty-three years of age, who died in one of the Parisian hospitals in consequence of an injury. The brain presented, 1st, a prolongation of the fissure of Sylvius to the superior face of the left hemisphere; 2d, two accidental distinct openings, around which the cerebral convolutions were folded, openings which established a communication between the periphery of the brain and the central parts; 3d, a trifid lobular division at the face of the upper hemispheres.—*Archives Générales, Sept.* 1833.

4. *Displacement of the Orifice of the Urethra in a Young Girl.*—Dr. Otto has met with a curious instance of this in a girl labouring under typhus fever, and in whom paralysis of the bladder supervened. Upon attempting to introduce a catheter to evacuate the urine, although the fossa which usually leads to the orifice of the urethra existed, no orifice could be there detected. On further search the orifice was found at the inferior and interior part of the left labia pudendi.—*Heidelberger Klin. Ann.*

PHYSIOLOGY.

5. *Sympathy between the Uterus and Mammæ.*—The *London Medical Gazette* for March last, contains some observations by Dr. Rigby on this subject, which are peculiarly interesting from the practical advantage to be derived from the play of this sympathy in the suppression of uterine hæmorrhage. There is, perhaps, remarks Dr. R. "nothing more interesting, or more worthy the attention of an accoucheur, than the various sympathies which show themselves between the uterus and other parts of the system. The morning sickness of early pregnancy; the convulsions in the latter months, or during labour; the violent rigors when the os uteri becomes fully dilated, or immediately after the birth of the child; the contraction of the uterus when the face is sprinkled with cold water, or after a draught of any cold fluid; are some of the most remarkable, among a considerable number, which occur before and during labour.

"The connexion, in the unimpregnated state, between the uterus and stomach is well displayed by the gastric derangement which frequently accompanies prolapsus uteri, and *vice versâ*. The pain and swelling of the mammary gland from menstrual irritation, or where there is subacute or chronic inflammation, or organic disease of the uterus, in like manner demonstrate the link between this organ and the breast. But the most striking instance of sympathy which I have remarked between these two organs, is the sudden and powerful contraction which is excited in the uterus, when in a state of inertia, by applying the child to the breast.

"My attention was first drawn to this subject by an observation which I met with some years ago in Carus's *Gynäkologie*, recommending the application of the child to the breast to promote expulsion of the placenta where it was slow in coming away; but I was far from being aware of the extent to which this sympathy really existed. In cases where there has been considerable disposition to hæmorrhage after labour, from non-contracted uterus, and where I have been afraid to leave the patient, lest flooding should come on in my absence, I have been for the last two years in the habit of ordering the child to be put to the breast as soon as her clothes, &c. were changed, and herself comfortably settled in bed, feeling that I thus diminished the chances there might be of any hæmorrhage occurring. It was not, however, till last year that I began to see the practical importance of this sympathetic connexion between the breast and uterus in its full extent. Having had two or three cases of severe hæmorrhage after labour, from uterine inertia, which had to a degree resisted all the common modes of treatment, and where permanent contraction could not be induced even by repeated injections of cold water and vinegar into the vagina, I determined to see what effect the application of the child to the breast would have upon the relaxed uterus, and was agreeably surprised to find the observation of Professor Carus confirmed in its fullest extent, firm and permanent contraction having been immediately produced in every case."

"When I first began," Dr. R. adds, "to use this plan of treatment in cases of inertia uteri after delivery, I was frequently startled by finding a sudden gush of blood, accompanied by a forcible discharge of coagula, follow almost instantly the application of the child; but soon satisfied myself, that so far from being a return of the flooding, it was merely the result of the uterus contracting firmly and expelling its contents.

"It is a common saying among nurses, that 'the child brings after-pains;' that is, when the child is first applied to the breast on the second or third day, as was formerly the custom, it was frequently followed by pretty smart after-pains which evidently resulted from the uterus being excited to contract and expel any coagula of blood which might be lodging in its cavity or sinuses. Hence, besides its beneficial effects in preventing any danger from hæmorrhage, the early application of the child to the breast is a valuable means of preventing much of that uterine pain and irritation which is apt to result from the presence of coagula, &c. in the womb, after labour.

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6. *Case of Vagitus Uterinus, before and after the Rupture of the Membranes.* By Dr. Heyfelder.—Whether it is possible for a child in the womb to breathe and cry, is a question which has been variously mooted by medical men, but has never till now been set at rest. I confess I used always to think that the cases we have on record of vagitus uterinus previous to the rupture of the membranes, were all fabulous; for it is quite unaccountable how, under such circumstances, the air necessary for breathing and crying can reach the fœtus. This day however, (the 23d of September, 1833,) my scepticism has been completely removed by the following case:—

The wife of a dyer, of the name of Holdevied, living in Gorheim, near Seigmaringen, a stout, well-made, healthy young women, aged 24, was in labour of her first child. The pains had lasted for 48 hours. On examination I found the abdomen regularly and firmly distended; the extremities of the fœtus were perceptible above the navel, towards the pit of the stomach; the orifice of the uterus was open to the extent of three inches, but the membranes were neither protruded in the intervals of, nor during the pains, which were not strong nor frequent. Immediately behind the membranes, however, lay the face of the child, in which, with my finger, I could distinguish the eyelids, the nose, and the mouth. So little liquor amnii was there present, that I at first thought there was nothing between my finger and the features of the infant, and that the membranes must have been ruptured previously to my arrival; but upon further examining the lips, I found the presence of a foreign membrane, which prevented the entrance of my finger into the mouth: and I should add, that the mouth itself, as well as the other parts of the face, lay between the upper and middle apertures of the pelvis.

While making this observation, and particularly at the moment of touching the lips, I suddenly heard a noise—it was the cry as of a new-born child beginning to respire. All who were present, the midwife, the husband, and the patient herself, heard it as well as I did, and testified their great surprise. This occurred in the short interval between two pains. I now considered it adviseable to rupture the membranes, and did so, with proper precaution, immediately over the mouth of the child: *some* water was discharged, and the same cry which was already heard was repeated, but it was much more distinct, and continued longer than before. We heard it also soon after, for the third time, and not less clearly. The forceps were presently applied, and I succeeded, not without some little difficulty, in bringing into the world a pretty strong living infant.

Such a presentation as that in the foregoing case,—the parietes of the uterus not covering nor compressing the child's mouth,—must be peculiarly favourable for the occurrence of vagitus uterinus—at least *after* the rupture of the membranes. And it would seem that such a phenomenon can only occur where the pains are weak, and the contractions of the uterus not considerable. But I shall not enter into any hypothesis to account for the occurrence of vagitus *before* the rupture of the membranes: I would only say, that it seems to be analogous to the chirping of the chick in the egg, first noticed by Mende, and too often attested since to be now gainsaid. And might not the deficiency of water between the membranes and the child's face, together with the peculiar presentation of the latter, have materially favoured the vagitus in the case just related.—*Med. Gaz. from Medicinische Zeitung. of Berlin.*

7. *Memoir upon the Structure of the Lymphatic Vessels. Read at the Medical Society of Emulation of Paris, at its Meeting on the 2d of October,* 1833. By Professor Mojon.—Dr. M. former Professor of Anatomy and Physiology at the Royal University of Genoa, has lately made some new observations upon the structure of the lymphatic vessels, which appear to be well worthy of the interest of physiologists. Having placed the lymphatic vessels upon a glass plate, and opened them through their entire length, Dr. M. has recognised, by the aid of the microscope, that which anatomists regard as valves or folds of their internal membrane, are in fact true sphincters. These sphincters are formed by circular fibres, which, diminishing at different points, the calibre of the lymphatic tube give rise to those nudosities which are remarked at their exterior. The contractions are still more visible when the lymphatics are injected with some liquid. They may also be observed very distinctly when this system is in an almost varicose state, as in subjects who have died with anasarca.

If the two ends of a varicose lymphatic be drawn in a contrary direction, these external nudosities disappear entirely, as well as the pretended internal valves.

Professor Mojon has observed, besides, that the fibrous membrane of the lymphatics, of which Mascagni has spoken with sufficient exactness, has longitudinal filaments from one contraction to another, much more numerous than the oblique. This crossing of the fibres forms a tissue like a kind of lattice.

The longitudinal fibres have their two ends attached to the transverse, which constitute, according to the views of the Genoese anatomist, the sphincters or contractors of the lymphatics. Thus the longitudinal fibres in contracting, draw one sphincter nearer to another, whilst the oblique fibres diminish the diameter. All these fibres, taking their point of support upon the circular fibres, dilate the superior sphincters by drawing the circumference downwards. By means of this physico-vital mechanism, the fluid which penetrates a lymphatic, irritates the portion of the vessel which it fills, which contracting upon tself, diminishes its cavity, and the fluid there contained is obliged to advance by thus successively traversing the open sphincter. This peristaltic motion is performed in the same manner as that of the intestines. This vermicular movement may be observed very distinctly in the lacteal vessels of the mesentery of animals, which are opened two or three hours after they have been well fed.

By admitting this organization of the lymphatics, the retrograde movement of the fluids contained in the absorbent system, admitted by Darwin and others, may be explained, which would be incompatible with a valvular apparatus.

If this system of vessels were valvular, why, says Dr. Mojon, when a lymphatic is opened in its whole length, does it never present but two parallel crescents from one space to another, one to the right, the other to the left, and never one and two halves? That, indeed, would happen often, if these crescents were true valves, like those of the veins.

The difficulty which is often met with in attempting to inject the lymphatic vessels in a contrary direction to the fluid, which passes through them, is owing to this; that the little pouches formed by the sphincters, and the relaxation of their parietes in filling them with the injecting matter, inflate them, and by that means close the opening of the lymphatic.

The observation several times repeated, that the different coloured fluids with which the lymphatic vessels are injected, never spread themselves either in the cellular tissue, or in the parenchyma of the viscera, unless by some laceration, induced M. Mojon to believe that these vessels had no patulous orifice, and that they took their origin from a cellular filament, which progressively became a villosity, an areolar spongiole, a capillary, and at length a lymphatic trunk. He also believes that the absorbent action of this system of vessels is performed by a kind of imbibition through the porosity of their most delicate branches, like a sponge. When once the liquid has penetrated by this kind of endosmose into the cavity of the smallest branches of the lymphatics, it advances into the larger trunks by a progressive and continued peristaltic motion up to the absorbent system.

Several French anatomists have lately repeated these experiments; they have obtained the same results.—*Journal de la Societe des Sciences Physiques et Chemiques, Nov.* 1833.

8. *Contraction of the Uterus after Death.*—Dr. Trustedt relates in *Hecker's Journal,* the following case of this. "A woman who was under the care of Dr. Rudolphi died suddenly, at an advanced period of pregnancy, in consequence of an attack of febris intermittens apoplectica. Her death took place about four o'clock, P. M.; in an hour after which, she was removed from the bed and placed on some straw on the floor, covered with a sheet. A woman left in the room to watch the corpse, was, about midnight, greatly alarmed by hearing a noise proceeding from the part of the room where the body lay, and immediately alarmed the house, being persuaded that the deceased was coming to life. On examination, a full-grown dead child was found between the legs of the mother."—*Dublin Medical Journal.*

PATHOLOGY.

9. *On the Pathology of Typhus Fever.* By Professor Bouillaud.—It results, says M. Bouillaud, from the thirty-six cases of typhoid entero-mesenteritis, which were lately treated in the wards of the La Charité, that the inflammatory affection of the lower part of the small intestines, and especially of the clusters of the glandulæ Peyeri, constitutes really and truly the fundamental and essential element of the disease. In every instance, from the very commencement

of the morbid phenomena, the local symptoms have clearly indicated the existence of such a phlegmasia; and the typhoid state has been developed under the influence of the entero-mesenteritis, in the same manner as we see it supervene in certain cases of severe phlegmonous erysipelas, of phlebitis, &c. It would not be more reasonable to consider inflammation of the intestinal follicles and of the mesenteric glands as a simple consecutive effect of the typhoid state, than it would be to regard a phlegmonous erysipelas, in the course of which, typhoid symptoms were developed, as the result of these very symptoms. Such a doctrine would be, in truth, a "contre-sens," pathogenesis. We do not, indeed, deny that erysipelas may occur in subjects already labouring under typhus fever; all that we contend for is, that the obverse case, viz. where the erysipelas is formed before the explosion of the typhoid symptoms, is by no means uncommon, and the scope of our reasoning is obvious when we assert, that the entero-mesenteric phlegmasia is of an erysipelatous character. To those who gainsay our doctrines, we confidently challenge them to adduce a single well-recorded and well-authenticated case of acute inflammation of Peyer's, and of the mesenteric glands, which did not exhibit in its march and in its symptoms, local as well as constitutional, a most close analogy, if not a complete identity, with that disease, which has been most unfortunately designated by the appellations of fever, typhoid affection, &c. If it be true, as the Father of Medicine has predicated, that "naturam morborum ostendit curatio," another very potent argument may be adduced in favour of our pathological tenets, from the success of the remedial measures we adopt. These are eminently antiphlogistic. It may be said that some of the means, as the quinine and the chlorurets, (which were used in a few of the cases in the hospital,) are very far from being so; but who does not perceive that, at the period when we had recourse to these, the inflammatory affection had assumed what the ancients denominated a malignant, or rather a putrid character, and, therefore, required for its arrest the intervention of certain measures, superadded to those of a strictly antiphlogistic tendency? In the period of the malady to which we are referring at present, there is indubitably a focus of putrid decomposition, which, reäcting on the whole economy, induces great and important changes in the mass of the blood and other fluids, and to counteract the effects of which, a new and paramount indication arises—an indication which is best fulfilled by the use of the chlorurets, both externally and internally, and of certain tonics, especially quinine.

How agreeable it is to find out that the doctrines which we have taught and inculcated for so many years, are in accordance with the experience of some of the greatest men who have gone before us. The illustrious Sydenham, whose authority is so often misapplied and abused in the present day, has admirably pointed out the relations between the phenomena of malignancy or putridity, and certain sorts or shades of inflammatory action:—"Cujus de malignitate opinionis inventio, humano generi longe ipsa pyrri-pulveris inventione lætalior fuit. Cum enim hæ febres præsertim malignæ dicantur, in quibis intensioris præ cæteris inflammationis gradus conspicitur." The following case will illustrate my treatment of typhus gravior.

A man was brought to the hospital in the second week of typhus fever, and of such an aggravated character were all the symptoms, that we quite despaired of saving him. The prostration was extreme—the tongue, lips, and teeth covered with a black crust—breath very fetid—respiration exceedingly feeble—pulse minute, and very rapid—abdomen distended—slight diarrhœa—surface of the belly and chest exhibited several reddish patches and papulæ, (eruption typhoide.) The state of this patient positively forbad the employment of any depletory measures, and the only judicious indication seemed to be, to obviate the putrid symptoms by the use of the chlorurets in drinks, baths, and enemas. In three or four days there was a sensible amendment; a blister was applied on the calf of each leg, and ten grains of the sulphate of quinine sprinkled every day on the excoriated surfaces. The diet was gradually rendered more nourishing, and consisted of broths, soups, fruits, and weak wine and water. This patient ultimately recovered.

Let the preceding case satisfy my opponents, that the same treatment is not uniformly, and to the same extent, followed, in my treatment of fever, without regard to the character of the symptoms, or to the constitution of the patient. By a judicious combination of antiphlogistic and antiseptic remedies, thirty-three cases out of thirty-six, admitted into our wards, were saved. Such success could not rationally be expected to result from a therapeutics, which inculcated the use of stimulants, purgatives, and emetics. At the commencement, indeed, of the malady, a purgative or an emetic may be administered with advantage; but if they be of drastic severity, or are frequently repeated, the enteritic evil must necessarily be much aggravated. What confirms me in this opinion is, that I know that M. Trousseau has lately abandoned the practice of giving frequent doses of Glauber's salt in dothinenteritis, [the entero-mesenteritis typhoide,] as recommended by his master, M. Bretonneau. At present he appears to be satisfied with the "medicine expectante;" for he gives nothing else but the white oxide of antimony, a substance very nearly quite inert; and yet he assures us, that his success of late has been very great in the treatment of cases of genuine typhus. No doubt much good may arise from merely abstaining from every thing positively injurious, and from not interfering with nature's own operations; but we think that even the late M. Dance, who was very sceptical as to the advantages of the common practice in fevers, could not have withstood such practical evidence as we have adduced in favour of the plan which was followed in the thirty-six cases, of which no fewer than thirty-three recovered.—*Journal Hebdomadaire.*

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10. M. Bouillaud *on Follicular Enteritis.*—The term "follicular enteritis" is to be preferred to the one formerly in use, "gastro-enteritis," on account of its more accurately indicating the nature of the existing lesion; for in many cases there is no inflammation of the stomach, the disease being limited to the mucous membrane, and especially the follicular apparatus of the small intestines; and besides, we see every day examples of genuine gastro-enteritis, unaccompanied with the symptoms of typhus fever. M. Bretonneau has lately introduced the term "dothinenteritis," or furuncular enteritis, and, although we cannot, with strict propriety, admit the furuncular character of the disease of the intestinal glands, the term is not a bad one. Follicular enteritis has the same meaning, and is more simple in its enunciation. The bizarre appellation of "ileo-dicliditis," in allusion to the seat of the disease in the ileum and ileocæcal valve, does not at all express the nature of the diseased change, but rather its mere habitat. M. Bouillaud is in the habit of employing the terms of adynamic or putrid entero-mesenteritis, and in order to localize the chief seat of the morbid change, adds occasionally a special, instead of the general prefix, thus, adynamic ileo-mesenteritis, &c.

Eighteen cases occurred in the service of M. B. at the La Charité, during the summer months, and of these, fifteen took place in men, and the remaining three in women. This striking difference is, no doubt, attributable to the more debauched and irregular lives of the former, and also to the circumstance of far more men coming to Paris, from the country or elsewhere, for subsistence; for, indeed, the greater number of the cases we see here, are in those who have resided but a short time in the city. Out of our eighteen patients, eleven had been only four months in Paris—four from six to twelve months—one fifteen, and another twenty months resident there. They were all under twenty-eight years of age. The season of the year, viz. during the months of June, July, and August, is that when the follicular enteritis is usually most frequently seen. It is always a difficult, and often an impossible thing, to trace the exciting cause of fever to any one specific agent or influence; and we shall be generally correct, if we enumerate, not one, but several, such as recent arrival from the country, laborious and excessive work, unwholesome and acrid food, debauchery, exposure to the inclemencies of the weather, depression of spirits, &c.

The premonitory symptoms are, a greater or a less prostration, general uneasiness, anxiety, want of appetite, feeling of coldness over the surface, thirst, head-ache, and in many cases, some degree of purging and nausea, or even vomiting. The head-ache becomes more and more severe, accompanied with noises in the ears, appearance of flashes of light before the eyes, vertigo, stupor, so that questions are answered slowly and with reluctance, and in many cases with delirium. The features are void of animation, except when inflamed during the delirious paroxysm; the eyes become considerably sunk, the nose is sharpened, and the lips are black, and coated with a dark crust. The skin is always hot and dry—the gentlest perspiration is ever a most favourable symptom; for, in all the worst cases, there is a constant aridity of the surface, and only towards the latter stage is it bedewed with an offensive sickening moisture. In some cases, there is an eruption on different parts of the body; this may be either papular, exanthematic, or pustular. A very characteristic symptom of this fever when severe, is the position or decubitus of the patient in bed—he lies in one attitude, seemingly unconscious of all around him, and if he moves, it is rather like the rolling of a senseless mass than the voluntary act of an animate being. Complete coma, convulsions, twitching of the tendons, &c. are always very unfavourable signs. The tongue is generally smooth, dry, and red at the point and along the edges, in the early stage; a filthy, yellow-coloured, cheesy-looking crust covers it, and in the more severe cases, so completely parched is it, that it has the appearance of having been broiled. The lips, teeth, and mouth are invested with a filthy brown or black sordes, and the breath is offensively disgusting. The thirst is always great—sometimes excessive. The gastric irritation is by no means observed in most cases; thus, in our eighteen patients, six only experienced vomitings; and except in one case, there was not any tenderness of the epigastric region when pressed upon. Pressure on the abdomen, especially over the cœcum and ascending colon, produced pain in ten cases. In fourteen, there was well-marked meteorism, or inflation of the bowels; and the degree of this symptom was usually proportionate to the severity of the case. The involuntary discharge of the urine, especially if this be muddy, ammoniacal, and fetid, always prognosticates great danger. The almost uniform coëxistence of pulmonary disease deserves our serious notice; in fifteen of our cases there was acute bronchitis, indicated by a dry sibilant, or mucous sibilant râle; in two, severe cynanche existed, and in one a double pneumonia, which caused the death of the patient. The biliary apparatus was not much affected in the majority of the cases. Four of the patients died, and the following are the most striking necroscopic appearances found.

Serosity under the membranes of the brain; substance of the brain more highly injected than usual; consistence nearly normal. The stomach, in all cases, presented at one or more points arborizations of minute vascularity; the texture of the mucous lining was generally softened, and thinner than in health. The duodenum was but little affected. On examining the ileum, there were found, sometimes even from its very commencement, patches of distinct eruption, or of an intense vascularity, with intermediate portions of healthy surface; but these phenomena were always more distinct as we approached its lower or cœcal extremity; at first, or highest up, the glandulæ Peyeri and aggregated follicles were merely swollen and enlarged; then here and there they were found to be ulcerated, the little ulcers having thickened edges, and the subjacent cellular tissue being denuded; as we proceeded lower down, the glandulæ Peyeri became more developed, and around them, the single or isolated follicles were converted into aphthous-like ulcerations, with red, and even bloody borders; towards the extremity of the ileum, the gut was found to be actually riddled with these ulcerations, which were surrounded with the soft, pulpy, and inflamed mucous membrane. In one case, the surface of the ileo-cœcal valve, and also of the cæcum, exhibited these last described appearances. The mesenteric glands, adjoining to the diseased portions of intestine, were red, hypertrophied, and softened. Most of the other viscera, as the liver, spleen, heart, &c. presented more or less ramollissement of texture, so that they were easily crushed between the fingers.

As to the *treatment*, it was in all cases of an antiphlogistic tendency—moderate, but not repeated venesection; the application of leeches upon the epigastric and cæcal regions, (the *average* number required for each patient was between sixty and seventy in all, or about sixteen at four different times;) in four cases, cupping was employed to subdue the bronchitic affection. In nine of the cases, blisters were used, sometimes to the thighs, at other times to the calves of the legs. In ten cases, the solutions of the chlorides, (which were first recommended in 1826, by M. Bouillaud, as valuable remedies against the intestinal disease, and the consecutive alteration of the mass of the blood,) were employed, either by the mouth, or in injections, or lastly, mixed with poultices, and applied to the abdomen. The bed-clothes also, of the patients were freely sprinkled with them.—*Med. Chirurg. Rev. and Journal Hebdomadaire.*

11. *On Chronic Gastritis.** [Extracted from Dr. STOKES' Clinical Lectures.]—Chronic gastritis is an extremely interesting disease, whether we look upon it with reference to its importance, its frequency, or its Protean character. It is commonly called dyspepsia, and this term, loose and unlimited in its acceptation, often proves a stumbling block to the student in medicine. Dyspepsia, you know, means difficult digestion, a circumstance which may depend on many causes, but perhaps on none more frequently than upon chronic gastritis. In the great majority of dyspeptic cases, the exciting cause has been over-stimulation of the stomach, either from the constant excess in strong, highly-seasoned meats, or indulging in the use of exciting liquors. Persons, who feed grossly and drink deeply, are generally the subjects of dyspepsia; by constantly stimulating the stomach they produce an inflammatory condition of that organ. Long-continued functional lesion will eventually produce more or less organic disease; and you will find, that in most cases of old dyspepsia there is more or less gastritis. But let us go further, and inquire whether those views are borne out by the ordinary treatment of dyspeptic cases. When you open a book on the practice of physic, and turn to the article dyspepsia, one of the first things which strikes you is the vast number of cures for indigestion. The more incurable a disease is, and the less we know of its treatment, the more numerous is the list of remedies, and the more empirical is its treatment. Now, the circumstance of having a great variety of "*cures*" for a disease, is a strong proof, either that there is no real remedy for it, or that its nature is very little understood. A patient afflicted with dyspepsia will generally run through a variety of treatment, he will be ordered bark by one practitioner, mercury by another, purgatives by a third, in fact, he will be subjected to every form of treatment. Now, all this is proof positive that the disease is not sufficiently understood. What does pathology teach in such cases? In almost every instance where patients have died with symptoms of dyspepsia, pathological anatomy proves the stomach to be in a state of demonstrable disease. It appears, therefore, that, whether we look to the uncertainty and vacillations of treatment, or the results of anatomical examination, the case is still the same; and that, where dyspepsia has been of considerable duration, the chance is that there is more or less of organic disease, and that, if we prescribe for dyspepsia neglecting this, we are very likely to do mischief. I do not wish you to believe that every case of dyspepsia is a case of gastritis. This opinion has brought disgrace on the school of Broussais. His disciples went too far, for whether the gastric derangement depended on nervous irritation, or anæmia, or disease of the liver, or mental emotion, they prescribed leeches and water diet, and thus very often brought on the disease they

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* For the treatment, see department of Practice of Medicine.

sought to cure. We may have functional disease, independent of structural lesion in the stomach, as well as in any other organ; it is no unusual circumstance, and the practical physician meets with it every day. A great deal of confusion, however, arises from the similarity of the symptoms. I remember an accomplished friend of mine getting into disgrace with one of the members of a board of examiners on this subject. He was asked to tell the difference between the symptoms of chronic gastritis and dyspepsia, and in reply stated that he could not. For this he was nearly rejected, but I believe, on a candid review of the circumstances, you will agree with me, that he knew more of the matter than the learned professor. In ninety-nine cases out of a hundred of chronic gastritis there is no fever, scarcely any thirst, often no fixed local pain, and this leads persons away from an idea of the existence of an inflammatory condition of the stomach. What are the symptoms of a chronic gastritis? pain of occasional occurrence, flatulence, acidity, swelling of the stomach, fœtid eructations, sensation of heat and weight about the epigastrium, and perhaps vomiting. Well, these are also the symptoms of dyspepsia, whether it be accompanied by inflammation or not. How then, when called to a case of this kind, are you to determine the point? I must mention to you here, that it is often hard to do this with certainty. There are two circumstances, however, which you should always bear in mind, as they will afford you considerable assistance in coming to a correct diagnosis; *first, the length of time which the disease has lasted;* secondly, the result of the treatment which has been employed. You will find, that where the disease is a chronic gastritis, that it has been of some duration, that it has come on in an insidious manner, and that it has been exasperated by the ordinary treatment of dyspepsia. Many persons think, that if you give a patient medicine, without regulating his diet or issuing a prohibition against full meals, that you can cure him, and that, as he has no fever, and can go about his usual business, there is no necessity for antiphlogistic regimen. But as the disease goes on, he complains of pain in the stomach during the process of digestion, feels uneasy after dinner, there is an unpleasant degree of fullness about the epigastrium, he also experiences a variety of disagreeable symptoms, sometimes being annoyed with pain in the chest, sometimes he says he feels it in the region of the heart, and sometimes about the cartilages of the eighth and ninth ribs. These symptoms subside after the process of digestion is completed, but during its continuance they harass the patient. Very often relief is obtained by vomiting, and hence some persons are in the habit of throwing up their food for the purpose of relieving themselves, and consequently can have no benefit by it. In some cases digestion goes on until the food seems to reach a particular point, and then an acute feeling of pain is experienced. In these cases the gastritis is generally circumscribed, and is likely to terminate in circumscribed ulceration. Various fluids are rejected from the stomach, during the course of a gastritis; sometimes acid, sometimes alkaline, sometimes insipid and sweet, sometimes bitter and bilious. There is generally a degree of fullness about the stomach, and the epigastrium is tender on pressure, but no decided tumour either of the pylorus, liver, or spleen, although the epigastrium presented that appearance of fullness and tension termed by the French "*renitence.*" The bowels, too, are constipated, and this is a matter worthy of your attention, for it sometimes unfortunately happens that the practitioner, mistaking the gastritis for simple constipation, goes on prescribing purgative after purgative, until the patient gets incurable disease of the stomach. I know a case of a lady who gets one stool a week by taking eight drops of croton oil. Some years ago, she was in the enjoyment of excellent health; her bowels happened to get confined, and she was treated by a systematic practitioner with continued purgatives; her bowels are now completely torpid, except when they are subjected to this unnatural stimulus. There are thousands of persons treated in this way, because practitioners look to consequences and not to causes.

There is one remarkable difference between acute and chronic gastritis, which deserves your attentive consideration, as it exemplifies a law applicable to all viscera under similar circumstances, and this is, that the sympathetic irritations are not so frequent or so distinct in chronic inflammation as in the acute form, and hence, in a case of chronic gastritis, we almost never have fever, and the affections of the nervous respiratory or circulating systems are by no means so well marked. It may even go on to actual disorganization of the stomach, and yet the patient will not complain of any particular symptom during its whole progress, which you could set down as depending exclusively on the sympathetic irritation of gastritis. Some of these cases, called dyspeptic phthisis, by Dr. W. Philip, are most propably examples of the sympathetic irritation of the lungs from chronic gastritis. Another case, respecting which much error prevails, is what has been called hypochondriasis. Persons labouring under these affections are condemned to run the gauntlet of every mode of treatment, sometimes (and fortunately for themselves) they are sent to travel, sometimes they are treated with musk and antispasmodics, then with the mineral acids, then with purgatives and mercurials, and lastly with bark, nitrate of silver, and stimulants. They go about like spectres from one practitioner to another, trying remedy after remedy, alternately sanguine with hope or saddened by disappointment, until at last they die, and, to the astonishment of all the doctors, the only disease found, on dissection, is inflammation and thickening of the mucous surface of the stomach. A condition, which, under these circumstances, it was difficult to say whether it was the original disease, or produced by "*fair trials*" of a number of powerful agents. Hypochondriasis is not always gastritis; but it is now found, that in many cases it commences and terminates with disease in the upper portion of the digestive tube and the assisting viscera. This you must always bear in mind.

Chronic gastritis terminates in various ways. Sometimes the inflammation is limited to a particular spot of the stomach, and here we frequently discover circumscribed ulcerations. In very bad cases these ulcers go on perforating the various coats of the stomach, until at last the contents of that organ escape into the serous cavity of the abdomen, and the patient rapidly sinks under a fatal peritonitis. It does not follow, however, that, in all cases of perforation, the contents of the stomach get into the perineum, causing death. Very often adhesions are formed, and the base of the ulcer is the serous covering of some other portion of the digestive system, or a false passage may be formed into the colon. One of the most common terminations of a chronic gastritis is, that the inflammation extends to other viscera; the patient gets disease of the liver, spleen, peritoneum, or lungs, and sinks under a complication of disorders. It was somewhat in this way that Napoleon died. He laboured for a considerable time under chronic disease of the stomach, which seems to have been overlooked by his medical attendants, and this terminated in the extension of disease to various other organs.—*Lond. Med. and Surg. Journ. Jan. 25th,* 1834.

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12. *Spontaneous Perforations of the Œsophagus and Trachea.* By Dr. ALBERS, of Bonn.—These perforations may be arranged under several heads. Under the first may be comprised all those which commence in the pharynx, and finally ulcerate the parietes of the larynx or trachea. Dr. Albers adduces three cases of this description; two from Monro and Sandifort, and one from his own practice. The first symptom, and that which predominates at the commencement of the disease, is an extreme difficulty of deglutition. In one case the patient was obliged to push food into the œsophagus with a small stick; nevertheless it often happens that the ulcerated surface is so sensible, that the introduction of any foreign body whatever, instantly excites spasmodic contractions of the œsophagus, and the instantaneous expulsion of the food by the mouth and nostrils. Angina pharyngea always complicates these ulcerations of the œsophagus. It exists in all cases, and the constancy of this symptom gives it considerable value. At the same time there is excessive secretion of mucus, the patient experiences a continual desire to swallow, and the glands of the neck are singularly tumefied; there is usually no pain, except during the act of

deglutition. All these symptoms appertain to simple ulcerations of the œsophagus; but from the moment that this canal communicates with the trachea by a fistulous opening, there is cough, which daily becomes worse, impeded respiration, &c. The patient soon emaciates; swallowing becomes more and more difficult; the food is rejected with violent coughing, and the patient finally succumbs, often after three or four years, sometimes after a much longer period. In a single case, death occurred at the end of a year and a half.

The second species of ulceration is that which commences in the air-passages, and which perforates the alimentary canal. This is infinitely rarer than the first, and also differs from it in the rapidity of its march, and the violence of its symptoms. Those indicative of an affection of the larynx, give the first alarm. The alteration of voice, cough, and mucous expectoration, are at first moderate, especially when the ulceration is not seated exactly in the vocal organ. But the expectoration soon becomes purulent or bloody, swallowing painful, and subsequently the food is violently rejected the moment they come in contact with the part of the œsophagus corresponding to the part of the trachea which is the seat of disease. By the efforts to cough, purulent matter, striated with blood, and sometimes pure blood is expectorated. During or after these efforts, half-digested substances are vomited up by the patient, whose strength rapidly diminishes, and he dies asphyxiated by food, which finds entrance into the trachea. Baillie positively denies the occurrence of this mode of perforation; nevertheless we find in a dissertation by Dr. Kunze, entitled *De Dysphagiâ Commentatio Pathologica,* 1820, some examples, in which the observation of the symptoms, as well as that of the pathological relations, have proved that the air-passages were the primary seat of the disease.

Finally, there exists a third species of perforation, produced by a tumour of some kind opening both into the trachea and œsophagus. Dr. Albers reports two cases from his own practice of this species. The tumours may be of different natures. Sometimes they consist of new formations of fibrous masses, of cancers, sometimes simple abscesses situated between the œsophagus and trachea. The commencement of tumours of the first species are not ordinarily announced by any very striking symptoms. There is difficulty in swallowing, cough, and all the symptoms of compression of the trachea and œsophagus; but in proportion as the tumour increases, the compression becomes greater, cough and vomiting come on, and the patient perishes from consumption, or by hæmorrhages from the surface of the tumour, which sometimes fill the bronchi and trachea.

Abscesses are seated in the cellular tissue, uniting the œsophagus to the trachea, and they are sometimes developed with great rapidity. The great quantity of pus expectorated is the characteristic symptom of this abscess having opened into the trachea; the anterior symptoms are the same as those from other tumours.—*Rev. Méd. Aug.* 1833, *from Graefe und Walther's Journal, S.* 1. 1833.

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13. *On the Mechanism of the Production of Pulmonary Emphysema, and on some of the Effects of Chronic Bronchial Inflammation.* By DAVID CRAIGIE, M. D.—Ever since the publication of the work of Laennec, in which this variety of lesion received a distinct place and consideration, it has been too much the practice for teachers to represent, and students to regard, pulmonary *emphysema* as a primary lesion, and thereby to overlook entirely its true character, and its anatomico-pathological relations. Every case almost of *dyspnœa,* and almost all cases of what are commonly called *asthma,* have been since that time attributed to *emphysema* of the lungs; while the formation of *emphysema,* and the mechanism of its production have been very much, if not entirely overlooked. I have long and repeatedly had occasion to observe, and to impress on the hospital pupils, the fact, that *emphysema* is one only of many effects of the chronic form of *bronchitis,* and that it is only at a particular stage of the latter affection that the emphysematous distention takes place.

In the early stage, indeed, of *bronchitis*, there is simply a diffuse or spreading inflammation or congestion of the pulmonary mucous membrane, and after it has subsided under proper treatment, that membrane, both where it lines the bronchial tubes and pulmonary vesicles, sooner or later returns to its natural condition; while the calibre of these tubes, and the capacity of the vesicles is little or not at all lessened. Either, however, after repeated attacks, or long continuance of this disease, not only does the inflammatory process extend from the mucous membrane to the submucous or pulmonary filamentous tissue, but by its long endurance it renders the former thick, villous, and brownish-coloured, secreting either much viscid mucus, or mucus more or less tinged with blood, or even occasionally pure blood, and indurates and solidifies the latter by the extravasation of albuminous fluid; while the increased thickness of the membrane, and the swelling of the submucous tissue, encroach so much upon the area of the bronchial tubes and vesicles, as to diminish remarkably the capacity of these cavities.

This swelling, however, of the pulmonary mucous membrane and filamentous tissue is not general over the whole of the tubes, nor even over the whole of one tube, otherwise it would produce fatal *asphyxia*. But it in general takes place at certain spots in the course of the tubes more remarkably than at others, producing a species of stricture of one or more bronchial tubes in one or both lungs. The effect of this again is various, according to its degree, and according to the component systems and textures of the lung most affected. One of the most frequent effects of the presence of one of these constricted portions, especially if the membrane secretes much viscid mucus which requires to be frequently coughed up, is to obstruct the passage so much that expiration becomes either inadequate or is interrupted. As respiration consists, therefore, in alternate inspiration and expiration, if air has been either inhaled by this tube, or by some of the communicating ones, it cannot, during ordinary expiration, be easily expelled. The effect is, that the bronchial membrane and pulmonary vesicles are excited by their physiological properties to frequently repeated expiratory efforts; and as these are inadequate to expel the air from the lungs, the compression of the expiratory muscles necessarily, by forcing the portion of lung into smaller compass, compresses the air already contained in the vesicles beyond the constricted point. The air thus confined, after many repeated expiratory efforts, forces its way, by its own elasticity, through the delicate mucous membrane of the vesicles into the pulmonic filamentous tissue, and, when once there, it continues to spread rapidly in proportion to the obstruction in the bronchial tubes, and the difficulty of producing efficient expiration. It is then that the air contained in these vesicles renders the chest, when struck, preternaturally resonant; while the extreme difficulty of breathing, with the dry sonorous *rhonchus* or sibilism, indicate the laborious struggle which is made in the tubes, contracted by swelling, and obstructed, as they are, by adherent mucus,—to inspire and to expire in an efficient manner.

In this manner, therefore, bronchial inflammation, either by continuance or repeated attacks, tends to produce *emphysema* and its usual phenomena; and there are few cases of emphysematous distention of the pulmonic filamentous tissue which may not be traced to this cause. In the young, when labouring under hooping-cough, in the aged, after frequently repeated attacks of catarrh, and in the middle-aged after the continuance of bronchial inflammation, in a sub-acute or chronic state, *emphysema* is with equal certainty, and in equal perfection, produced. In the first case, indeed, as the bronchial symptoms subside, the tubes become more pervious, and expiration becomes so much freer and less interrupted, that the air ceases to be urged through the vesicular membrane, and that which had been already impelled into the pulmonic filamentous tissue is at length absorbed. But in the two latter instances, in which the thickening of the membrane either abates little, or continues unchanged, the emphysematous distention continues to increase, until it has attained an extent almost incredible to those unaccustomed to examine cases of chronic bronchial disease.

Emphysema, however, is not the only effect of this state of the bronchial tubes. The impracticability of inspiring and expiring completely in such a state of the lungs, which implies the absence of the most essential condition of respiration, viz. the frequent and incessant change of air in the bronchial tubes and vesicles of the lungs, interferes with the necessary changes in the blood of the pulmonary artery and veins, which, therefore, passes from the former vessel into the latter, much less completely aerated than it would be in the healthy state. In addition to this, as the motion of the blood through the pulmonary artery into the pulmonary veins is always more free, in proportion as the expansion of the lung by inspiration, and its collapse by expiration, is extensive; and as both the obstruction of the bronchial tubes by viscid mucus, and the swelled and congested state of the bronchial membrane and submucous tissue, prevent the branches of the artery and veins from freely expanding themselves, the motion of the blood through this order of vessels begins to be interrupted and retarded, and thus to induce a congested state of the whole pulmonary system, which not only adds to the *dyspnœa* and *orthopnœa* of such patients, but eventually terminates in dropsical effusion into the pulmonic filamentous tissue, into the cavity of the *pleura*, and even into the general cellular membrane. The pulmonic filamentous tissue is in general the first seat of this dropsical infiltration; and it is one of the most common changes recognised in inspecting the lungs of persons cut off by long-continued bronchial inflammation.

Chronic bronchial inflammations, further, by its influence in impeding respiration and the circulation of the pulmonary artery and veins, has an indirect tendency to induce disease of the heart. In consequence of the difficulty which the blood encounters in passing through the branches of the pulmonary artery, the trunk of that vessel becomes permanently distended; and the right ventricle, being also distended and incessantly excited to new contractions, becomes affected with hypertrophy, sometimes with dilatation, sometimes without; and in other cases it may be merely enlarged with extenuation of its walls. It is, I conceive, in consequence of the union of the two ventricles in the human subject, that this excessive distention and inordinate action, by being first confined to the right ventricle, gives rise to a similar inordinate action in the left ventricle, that the latter is often found in a state of hypertrophy in persons who have long laboured under chronic bronchial disease. The fact of the connexion is at least well established; and the wards presented few instances of bronchial disease in which the heart was not affected, and in most of the cases of disease of the heart, the bronchial membrane and pulmonic tissue had been previously affected.—*Edin. Med. and Surg. Journ. Jan.* 1834.

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14. *Death Caused by the Opening by Ulceration of a Blood-vessel in the Stomach.*—An instance of this has been communicated to the Anatomical Society of Paris by M. Monestier. The subject of the case was a man, seventy-eight years of age. On dissection, at the base of an ulcer, situated near the cardiac orifice of the stomach, an open vessel was discovered. A large quantity of coagulated blood was found in the stomach, and through the whole extent of the intestinal canal.—*Archives Générales, Jan.* 1834.

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15. *Vaccination.*—Two children were vaccinated by M. Brachet of Lyons. Ten days afterwards there being no appearance of the development of the vaccine disease, M. B. re-vaccinated these children. The day after this second vaccination, the punctures first made became inflamed, and the disease subsequently went through its regular course. The punctures made in the second vaccination dried and disappeared.—*Rev. Méd. August*, 1833.

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16. *Re-Vaccination of the Prussian Army.*—A circular, dated Berlin, March 15th, 1833, signed by—Von Wiebel, Chief of the Military Medical Staff, declaring that as the results of the re-vaccination of the army, as already affected, fully proves its necessity, it appearing that, in the guards alone, 1425 out of 2641 exhi-

bited the true vaccine pustule, the order, therefore, for re-vaccinating all recruits is made absolute, and the physician-in-chief of every division is required to procure and collect from all the several regimental surgeons, correct lists of all the men who have been re-vaccinated, as well as every circumstance coming under their observation, connected with the small-pox, and to report the same every year, at the end of February, to the Royal Military Council. This is followed by a statement, entitled "*Collection of the reported results of re-vaccinating the army.*" Whereas a number of individuals have been attacked with small-pox, and some have died in consequence, notwithstanding that strongly-marked scars unquestionably proved their having been vaccinated at an early age, it is, nevertheless apparent that, in advanced years, they still are liable to be infected; and that such is likely to be the age at which they can be admitted to military service. Hence, on the representation of this fact, by the chief staff physician, to the commander-in-chief of the army, an order was despatched, on the 26th of March, 1831, to all the medical officers of the army, for the re-vaccination of all the men who may appear to be possibly liable to suffer; as well as all recruits whatsoever, whether they have marks of previous vaccination or not. This order was attended to by the several corps which it reached, as far as could be effected, and with the following results. In the 3d corps of the army, being at Erfurt, in 1831, where the small-pox was raging, the 24th regiment of Infantry, and the Fusileers of the 20th, were re-vaccinated, and, out of 6020 men, 2354 exhibited pustules; among which more than one-eighth proved of the true vaccine character. In the 8th corps, 2784 were vaccinated, and 925 took; among which, also, about one-eighth proved true vaccine.

In 1832, 3942 of the 3d corps were vaccinated, and 1594 exhibited effects; but, as in the rest, somewhat more than one-eighth were true vaccine: in the 5th corps, of 3234 vaccinated, 2535 were affected in the aforesaid proportion. As yet, there are no accounts of the other divisions of the army, to which, however, the order has been sent and executed; the royal military chief being desirous that the whole army shall be placed in safety on this head. There being great doubts of the extent of this prophylactic measure, either from the possible failure of the original vaccination, or from the effect wearing out by time; at all events enough is established to prove the necessity of the measure; and it is notorious that, after the re-vaccination of the doubtful men, and the new recruits of the Fusileer Battalion, at Erfurt, not one became infected, although closely in contact with very many violent cases of the disease. The circular goes on to direct that a constant attention be paid to the re-vaccination of the recruits, and gives some minute military regulations for the purpose, demanding a regular return to be made as before mentioned, after the following manner:—1, name of the regiment; 2, place; 3, name of the men; 4, number; 5, if marked by previous vaccination (*a*) certain (*b*) uncertain (*c*) none; 6, the re-vaccination (*a*) regular effect, number (*b*) irregular, number (*c*) without effect, number; 7, repetition on those which failed, (*a*) with effect (*b*) without; 8, number of pustules going through their course; 9, account of cases occurring during the year, in spite of vaccination, (*a*) varicella (*b*) varioloid (*c*) small-pox; 10, general remarks.—*Lane's Monthly Archives from Rust's Magazin.*

17. *Re-vaccination.*—The question of re-vaccination continues still to occupy much of the attention of physicians of France, not only in the capital, but in all the provincial towns of note. The Academy of Medicine has appointed a committee to examine all the doubtful points connected with the subject, before giving any decided judgment, and, from time to time, various communications are addressed to that body from practitioners residing in the provinces. Amongst the latter, M. Luhott, a physician residing at Bischwiller, has made several experiments, the results of which possess interest. Within a period of four years this physician has practised no less than 3600 vaccinations; and in the year 1832, when an epidemic variola attacked the canton, he had occasion to repeat the operation on several individuals—eighty-six persons of both sexes,

who had all been vaccinated during infancy, presenting themselves for a second vaccination. With the exception of one or two, their arms were marked with the vaccine cicatrix in a perfect form. The following table gives the results of the operation, which was performed by introducing the matter through seven or eight punctures on one arm only:—

		Perfect Eruption.	Incomplete Eruption.	False ditto.
Individuals re-vaccinated below 10 years of age	12	0	5	7
From 10 to 20	36	5	12	19
From 20 to 30	32	5	12	15
From 30 to 40	6	2	2	2

The first column of this table, *(perfect eruption,)* embraces all the individuals in whom the pustules were developed three or four days after the operation had been performed, assuming the true character of the vaccine pustule, and following the same march, with this sole difference, that the duration of the secondary eruption was sometimes two days less than that of a true primary one. The formation of the pustules was always attended by a secondary fever, and they did not fail to leave a well-marked cicatrix behind them. The second column, *(incomplete vaccine,)* embraces those in whom the punctures were covered with pustules on the second or third day; but these always assumed an irregular form, terminated in a sharp elevated point, were filled with a dirty yellow serum, and faded on the sixth or seventh day, without being attended by fever, or leaving any trace on the arm. It is unnecessary to recur to the third column, as it gives only negative results.

Thus, from the preceding table, it clearly follows, that of eighty-six individuals who were re-vaccinated, twelve presented examples of a second eruption, so normal and perfect, that it was impossible to distinguish it from a true primary vaccine. Perhaps it may be here objected, that the first vaccination was imperfect and ill-done; but M. Lurott affirms, that two-thirds of these patients, at least, presented vaccine cicatrices so deep and well defined, as to leave no doubt of the efficacy of the primary operation, and we are entitled to conclude with him that these individuals exhibited examples of two distinct and perfect eruptions of vacciola.

As to the interval of time which elapsed between the two operations, and the results which follow from this portion of the table, M. Lurott observes, 1st, that before the age of ten years re-vaccination has never, in his hands, produced any thing but a false vaccine; he has never been able to develope a true and complete eruption when the interval between the two operations was so short; 2d, that above the age of ten years re-vaccination has, in a certain number of cases, completely succeeded. The proportion of cases in which the operation gave rise to a second eruption, seems in direct ratio with the interval which elapses between the first and second vaccinations; the longer the interval, the greater the chance of success. Thus, in some cases, the first vaccination which we perform, although perfectly well done, has only a preservative effect of a temporary nature, and is limited to a certain number of years. This seems to be the true solution of the question: but what is that limit? Here our answer cannot be so precise, for it varies according to individual constitution, but from the experiments of M. Lurott, the effect would seem to last for at least ten or twelve years after the first vaccination; but this is a subject which requires a vast number of experiments in different seasons and countries, before we can hope to arrive even at an approximate resolution.

A question proposed by the Academy, and which has not yet been satisfactorily answered, has also been investigated by M. Lurott, though in a limited manner, viz. Will the vaccine matter taken from the pustule of a secondary eruption produce a true primary vacciola? The author answers in the affirmative, on the faith of some experiments, one of which we quote, as it seems very decisive:—

Mademoiselle Bourguignon, nineteen years of age, who had been vaccinated for the first time at the age of seven months, the traces of which were exceedingly well marked on both arms, was re-vaccinated in November, 1832. On the seventh day after the eruption, the left arm exhibited pustules of a complete eruption, a few drops of matter were extracted from these, and a portion was introduced on the same day into the right arm of a healthy child, four years of age. Six punctures were made. A quantity of virus taken from another child, who had been vaccinated for the first time, was introduced into the left arm of the same infant by an equal number of punctures. The boy, thus vaccinated in both arms, was brought to M. Lurott for examination on the seventh day. The vaccine pustules were equally perfect on both sides, but they were not quite so well developed on the right arm. The progress of the eruption, for both was exactly the same, and the cicatrices which remained, were as deep on one arm as on the other. The virus collected separately from both sets of pustules was afterwards inoculated into different individuals, and gave similar results.

From this and several other facts, which we may have occasion hereafter to lay before our readers, we are entitled to conclude that re-vaccination furnishes a matter as efficacious as that produced by a primary vaccination; indeed we have the analogy of small-pox to support this fact, for experience too often shows, that a varioloid may give rise to the development of a confluent small-pox, whether the individual be vaccinated or no. There is some foundation, therefore, for the opinion which begins to prevail among the public, that the preservative effect of vaccination is only temporary, at least in a certain number of individuals; but this, unfortunately, does not diminish its value as a prophylactic, for we have it in our power to repeat the operation whenever circumstances may seem to require it.

Were the statistical account of small-pox cases preserved by physicians on an extensive scale, we should soon have data enough to draw some certain conclusions, but this is not the case, especially in England, where questions of public health, (unless they happen at the same time to affect commercial interests,) are totally neglected by the government, and left to individual zeal or taste for investigation. The canton of Bischwiller comprises about 25,000 inhabitants, and of these the greater part has been from time to time vaccinated by physicians appointed under the government; the non-vaccinated may amount, perhaps, to one-thirtieth of the whole population. In 1832-3, small-pox broke out in this district, and attacked 439 individuals, of whom 93 were not vaccinated, and 346 were. If we examine these 439 patients with regard to their age, we find that 103 were less than ten years of age; 146 from ten to twenty; 156 from twenty to thirty; 34 from thirty to forty, &c.

The result to be drawn from this comparative statement of ages is interesting and instructive. In the first place we may remark, that the class embracing children below ten years of age, is the most numerous in a population, and contains the greater number of non-vaccinated individuals; yet the amount of patients in this class is one-third less than for the two following. Whence this difference? The answer must be drawn from the modifying effects of time on the preservative power of vaccination. During the eight or ten years which succeed the first vaccination, the preservative effect of the matter is most complete, and gradually looses its influence with succeeding years. After the age of thirty or thirty-five, the number of patients was comparatively insignificant, because after this age the disposition to contract small-pox is very feeble, and hence re-vaccination is not so necessary for those advanced a little in life, as for the young or adults.—*Lancet.*

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18. *Ulcerations of the Intestines cicatrized.*—M. SEDILLOT exhibited to the Anatomical Society of Paris, at their meeting of the 8th of August last, a portion of the intestine of an individual affected with dothinenteritis, from which he was convalescent, when he died from abscess of the elbow. Some of the plates of Peyer were perfectly cicatrized, and others partly so; in some places

the cicatrice reposed upon the serous tissue itself, the plates being entirely destroyed.—*Rev. Méd. Oct.* 1833.

19. *Note of a Case in which Thirteen Ounces of Cerebro-Spinal Liquid was Found.* By M. Montault.—The subject of this case was a man sixty-eight years of age, who had always enjoyed good health. The 12th of June becoming intoxicated, as was habitual, he became delirious, with difficulty of moving. When he was admitted at the Hôtel-Dieu some days after, he was able to move all his limbs, but with little energy; his tongue was covered with a very thick, brownish crust; he had not entirely lost his faculties, but he gave a bad account of what he had felt; he was said to have a cerebral affection, the nature of which was not discovered, and he died the 19th, after having remained twenty-four hours in a comatose state. At the autopsy the only thing that was found to be wrong was that there were twelve ounces, seven drachms and a half of cerebral spinal liquid, and the membranes with which the liquid was in contact, were of a dull white colour and infiltrated. We do not know if it be proper to attach much importance to this anomalous quantity of cerebral spinal liquid. In a habitually healthy state, it appears that the quantity of this fluid varies from six to seven ounces in old men. The difference then is not as great as it would be at first thought, nevertheless it is a fact to be remarked, and perhaps some cases may be found resembling it.—*Journ. Hebdom. August,* 1833.

20. *New Theory of the Formation of Tubercles.*—At a late meeting of the Academy of Medicine, M. Breschet read an interesting report on this subject, of which the following is a *resumé*.

Various opinions have been promulgated on the formation of tubercles. Some regard them as products of inflammation; by others they are attributed to a peculiar action, which is not inflammatory; and some physicians refer the origin of tubercles to parasitical animals of the family called by M. Bory St. Vincent, *psychodiaires*.

M. Kuhn, of Niederbroun, adopts this latter opinion. According to him, tubercles are originally nothing but acephalocysts, and *tuberculization*, a name invented expressly, is the result of the destruction of these animals. The author of the present paper has chiefly studied the development of tubercles in the lungs, and employed for that purpose a microscope, magnifying nine or twelve times. When you extract with precaution one of those small granulations, of a gray colour, which abound in the lungs of certain individuals, and are the origin of tubercles, and place it under the focus of the microscope, having lacerated it, you see that it is composed of other granulations still smaller; and the lacerated substance seems to be composed of an innumerable number of small albuminous globules, connected to another by hyaline filaments, and the whole enveloped by a layer of mucus. Granulations, therefore, appear to be constituted by a filamentous apparatus, surrounded by globules in great number. The analogy is clear and striking between this structure and that of the mould which forms on paste, bread, &c.

This analogy, without doubt, does not amount to a demonstration; however, the ideas of the author, (says M. Breschet,) deserve peculiar attention; they point out the way to a new theory, and to the probable existence of a new class of beings which has not hitherto been suspected. When we examine the granulations with care, we find a great number which become opaque in different points; others are already half opaque; finally, some have become perfectly opaque in their whole extent.

These observations afford a strong argument against individuals who regard the granulations as totally foreign to the production of tubercles. Tuberculization commences in the centre of the granulation, and extends from the centre to the circumference. It is effected by the absorption of the mucous surrounding the granulation, which is converted into a substance composed simply of the globules and hyaline filaments. The tuberculization goes on more readily in certain individuals than in others, and may go on to such a degree as to obstruct the lungs altogether, and produce death before the tubercles are perfectly formed. M. Kuhn has also examined, with the microscope, the expectorations of phthisical individuals. When the globules which float in the more liquid matter were separated, he found them equally composed of hyaline filaments, and of small viscid globes surrounded with mucous; thus there is a striking resemblance between the globules found in the spittle, and the gray granulations disseminated through the lungs.

From these several facts the author concludes:—1st. That pulmonary granulations are composed of globules and hyaline filaments, clothed with mucus. 2d. That they are analogous to parasitical animals found in other substances. 3d. That they may be converted into tubercles, although this change is not always necessary. 4th. That tuberculation is effected by the absorption of the mucus, and finally, that we find the elements of these granulations in the expectorated matter.—*Lancet, May 10th,* 1834.

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21. *On the Means of Preventing Scarlatina.* [Extracted from a Memoir presented to the Royal Academy of Medicine. By M. Miguel, M. D.]—Being convinced of the inefficacy of the hygienic and therapeutic means hitherto employed against the propagation of the scarlatina, the author of the present memoir was induced to make several experiments, from which he thinks himself justified in concluding "that the scarlatina, like many other analogous diseases, may be inoculated so as to determine a local inflammation which has little reaction on the economy, but is preservative in the same manner as the vaccine virus is against small-pox." As a preliminary measure the author made numerous experiments with the vaccine and variolic matter on adults and children, from which he deduces the following proposition, viz.:—that it is possible to localize often, if not always, those eruptive diseases which are capable of being inoculated, and that individuals subject to be affected are preserved by this process from subsequent danger of contracting the disease. Since, then, the scarlatina may be inoculated, why should it not follow the same laws as variola, &c. and be localized like them, with a preservative influence on the constitution? This was a theory worthy of investigation. M. Miguel therefore was desirous to put it to the proof, and in November, 1833, an epidemic attack of scarlatina, which broke out at Nazelly, afforded him an opportunity of making the following experiments.

Experiment 1.—A young girl, the child of Dennis Carron, fifteen years of age, presented an example of scarlatina in the most unequivocal form. On the fourth day of the eruption the author pricked several papulæ with four lancets. The incisions did not bleed, but a yellow matter was discharged, and adhered to the point of the instrument. This was carefully preserved, and the author immediately proceeded to the house of a nurse, where several children from the *Madeleine* of Tours had been placed. Several slight incisions were here made in the arm of an infant twenty-seven or twenty-eight months old, and the matter contained on the points of the lancets was introduced. On the following evening, that is, thirty hours after, the incisions began to exhibit a blush of redness. On the second day the redness was well marked, and continued to increase in intensity during three days. Each inflamed prick of the lancet resembled, on the fourth day, a commencing vaccine pustule. On the fifth day after the inoculation the inflammation had disappeared. There was no general fever, and the health of the little patient was not disturbed in the slightest degree.

Experiment 2.—Fifteen days after the date last mentioned in the foregoing case, the other children of Dennis Carron were affected with scarlatina. M. Miguel now received the matter on twenty-four lancets, as in the preceding case, and within an hour again inoculated the little child which was the subject of the former observation, in six different places. The incisions now made did not become red, or exhibit any sign of a morbid action taking place in the part. M.

Miguel after this proceeded to the house of another nurse, and inoculated three young children, by making six incisions of the charge lancets on the arm of each. These experiments gave rise to inflammation in the case of one child only, aged four years; three of the lancet pricks inflamed, and produced as many points, which followed the same march as in the case of Carron's child, already described. This new inoculation is regarded by the author as nearly decisive of the question, for if the inflammation which took place in the arm of the first infant was merely traumatic, why was it not renewed on the second application of the virus, and why in the latter experiment did eighteen incisions give rise only to the formation of three pustules, which, as in the case of the child twenty-eight months old, followed the march of a scarlatinous inflammation?

Experiment 3.—It now remained to determine whether this local affection was a preservative against the scarlatina. On the 18th of January, 1834, the author was called upon to see the child of a mason, named Bocé, affected with scarlatina anginosa of the most severe form. The disease had existed twenty-four hours. The man, his wife, and three children, inhabited one low, damp, ill-aired apartment, and it was impossible to separate the sick child from the others. M. Miguel had frequently observed, that when scarlatina breaks out in a family, the first case usually precedes the others by twelve or fifteen days; he, therefore, proposed on the third day to charge a lancet by making an incision on the fore-arm of the sick child, where the eruption was most abundant, and to inoculate the virus into the other children. The mother consented to this proposal, and, accordingly, ten incisions were made in the thighs of a little sister, nine years of age, with a charged lancet. The boy, aged about twenty months, was inoculated in six different points; the epidermis alone was raised up on the point of the lancet, as in vaccination. On the following morning the incisions made in the thigh of the little girl were transformed into as many black points, from dried blood, each surrounded with a small red areola. On the second day this areola was larger, and of a deeper red. On the third day, the inflammatory circle remained stationary, but the skin of this part seemed to have become a little thicker than natural. The inflammation resembled exactly, in form, colour, and tumour, a papula of scarlatina. On the fourth day there was no change, and on the fifth all trace of inflammation had nearly disappeared, the skin remaining only a little brown. There was no fever, nor enlargement of the axillary ganglia. As to the boy, five of the incisions only became swollen and red like those of his sister: they were somewhat more developed and of a deeper colour than her's, a circumstance that might be attributed to the greater tenderness and vascularity of the skin in this young subject. Since the 19th of January up to the 1st of April these children have inhabited the same chamber, and slept on the same bed with their sister. No precaution of any kind was taken to preserve them from contracting the infection, yet both have remained perfectly healthy, and free from any eruptive attack.

These facts, though not sufficiently numerous to decide a question of this kind, are not without considerable interest, and should engage physicians to report, on as extensive a scale as possible, the experiments detailed.

MATERIA MEDICA.

22. *Some Remarks on the Plant which yields the Cascarilla Bark.* By David Don, Esq.—There is reason to believe that many species of *Croton* afford a bark partaking more or less of the properties of cascarilla, and indeed this opinion is borne out by analogy with other genera among whose members similar qualities are generally found to prevail. It is a curious fact, however, that the *Croton cascarilla* of Linnæus possesses none of the sensible properties of cascarilla bark. The late Dr. Wright, whose knowledge of the medicinal

plants of Jamaica was unrivalled, appears to have been the first to determine this fact, and that the bark in question was derived from the *Croton eluteria*, of which a faithful representation will be found in Sloane's Jamaica, (vol. ii. t. 174. f. 2,) referred incorrectly by Linnæus to his *Croton glabellum*. The same opinion seems also to have been entertained by Linnæus himself, for in the first edition of his *Materia Medica*, the *Cascarillæ cortex* is mentioned as one of the products of *Clutia eluteria*, but he afterwards, as now appears on very insufficient grounds, altered his opinion in favour of a plant with which he was entirely unacquainted, except from the figure in Catesby's Carolina, (vol. ii. t. 46.) Of this plant, which he named *Clutia cascarilla*, he had then seen no specimen, and in the *Species Plantarum*, where it occurs for the first time, he has stamped it with the usual mark of an obscure species. Of *Clutia eluteria* he had a sample, from which he evidently drew up his description, in the *Amœnitates Academicæ*, although he confounded with it a Ceylonese plant, which he had taken up in the *Flora Zeylanica* from Hermann, and likewise two other totally different species, the first figured by Plukenet, which is *Croton micans* of Swartz, and the second by Seba, (*Thesaurus*, vol. i. t. 35. f. 3.) In the Lambertian Herbarium, there is a specimen from Curaçao exactly resembling the last-mentioned figure, which I should be inclined to refer to *Croton nitens* of Swartz. The specific character, which occurs throughout all Linnæus' works, of *Clutia*, or rather *Croton eluteria*, appears to refer entirely to the Ceylon plant, whose history is still involved in great obscurity.

Dr. Wright considered the Elutheria and Cascarilla barks as the produce of *Croton eluteria*, and this opinion is now pretty generally adopted by pharmaceutical writers; but I am disposed to regard them as derived from two distinct species, and I rather incline to the opinion of Boulduc, Spielman, and others, that the cascarilla bark is a production of the Spanish Main, for it does not appear that it ever was obtained from Jamaica, or even from the Bahama Islands, (from one of which the appellation Eluteria or Eleutheria is derived,) and it is now ascertained, from the recent observations of Messieurs Schiede and Deppe, that a bark, agreeing in every particular with the cascarilla bark of the shops, is collected extensively in the vicinity of Jalapa, at Actopan, and in the district of Plandel Rio, in the province of Vera Cruz, Mexico, where it is known by the names of Copalche or Quina Blanca. These gentlemen considered the plant at the time to be identical with the *Croton eluteria*, but although closely related, it is nevertheless essentially distinct from that species, differing in its broadly cordate, 5-nerved leaves, which are slightly peltate at their insertion, and of a more coriaceous texture. In *Croton eluteria* the leaves are ovate-oblong or elliptical, furnished with a solitary midrib, having obliquely transverse ramifications, and the base either obtuse or somewhat attenuated, but neither cordate nor peltate. The inflorescence is racemose, and in other respects nearly similar in both species. The tree grows to the height of twenty-five or thirty feet, is much branched, and clothed with a profusion of broadly cordate leaves, silvery underneath, and numerous clusters of white flowers. The bark is exteriorly of a gray colour, pale brown within, of an even fracture, possessing a strong aromatic flavour, and an agreeable bitter taste, and in other respects accords with the Cascarilla bark of the shops, for I have carefully compared samples of the bark sent by Messieurs Schiede and Deppe with others from the Apothecaries' Hall, and I think there cannot be a question as to their identity. To the Mexican species I would recommend the application of the name of *Croton cascarilla*, that of *Pseudo-China* given to it by Professor Schlechtendal, in his recent treatise on the subject, being in many respects objectionable, and leaving to the *Croton cascarilla* of Linnæus the more recent epithet of *linearis*, applied to it by Jacquin, being perfectly convinced of the identity of the latter with the Linnean *Cascarilla*, and that the distinctions hitherto relied on to keep them apart are of too trivial and variable a nature to be entitled to the importance which has been assigned them. The specimen in the Linnean Herbarium appears to have been communicated by Philip Miller, and belongs to the West India variety, with narrower leaves, and consequently is what Jacquin meant by his *Croton linearis*. The glands at the insertion of the leaf, I observe, vary from two to four, although, in the specific character of *linearis*, they are stated to be uniformly two, and three in *Croton cascarilla.—The Edinburgh New Philosophical Journal, April*, 1834.

23. *Febrifuge Properties of Salicine.* By M. Richelot.—The bark of the white, crack, and Huntingdon willow, was long ago employed in the treatment of ague with various success; but its power over the disease appeared to be very questionable. The first chemists who analyzed it discovered in it no alkaline principle similar to quinine or cinchonine, and it gradually fell into disrepute. Fontana, however, maintained the existence of a certain febrifuge principle, to which he gave the name of *Salicine*. His opinion has since been corroborated by Buchner, Rigatelli, and Leroux, the last of whom was the first to employ it in France. Numerous trials were made of it in various quarters, and, of course, from possessing the charm of novelty, its praises were sounded in no ordinary tone. Doubts, however, continued to be entertained, which were confirmed by the result of some trials made at La Charité by M. Pelletier, by which it appeared, that in his hands, *salicine*, though very bitter, seemed to be far less active than the principle of the cinchonas.

Dr. Richelot mentions the trials made by various of its supporters, the results of which appear to be altogether negative, while other experiments tended to show that it is possessed of no obvious febrifuge power. The doses given in these experiments, varied from six to twenty-four grains. With the view of settling the question, M. Andral instituted several experiments, the particulars of which are recorded by M. Richelot. Ten patients of different sexes, whose ages varied from seventeen to thirty-eight, were selected for the purpose, and, after considering the results of these, as well as all that has been mentioned by others, M. Richelot comes to these conclusions:—1st, *Salicine* appears really to possess febrifuge qualities, but in so small a degree that we ought not to hesitate a moment in preferring the sulphate of quinine. 2d, *Salicine* may be employed in any case where irritation or inflammation exists, contraïndicating the employment of the sulphate of quinine, in hectic fevers with periodical paroxysms and abundant diarrhœa, or where sulphate of quinine cannot be had. 3d, It is not only unnecessary but injudicious to employ it at the beginning in high doses. Six or eight grains administered between the paroxysms, on the same principles as sulphate of quinine, produce as good or even better effects than higher doses, though, if necessary, the doses may be increased.—*Edinburgh Med. and Surg. Journ. from Archives Générales, September*, 1833.

24. *New Anthelmintic. Spigèle anthelmintique, or Arapabaca.*—In a short memoir on the virtues of the above-named plant, M. Noverre, physician at Martinique, has drawn the attention of practitioners to the *arapabaca*, as an anthelmintic which is infallible in its action, enjoys a sedative power, and is also possessed of a peculiar property, which admits of its being administered in all possible cases, without aggravating inflammatory symptoms, should they happen to complicate the presence of worms in the intestinal canal. This latter quality gives it an immense advantage over turpentine and other stimulant purgatives, which are at present so universally employed in worm cases; and has been recognised in the plant by all physicians who practise in Gaudaloupe, Cayenne, Martinique, and South America.

The "Spigèle anthelmintique," *arapabaca*, is an herbaceous annual plant, of the pentandria monogynia, growing in South America. The stem of the plant is round, and the leaf verticillated round the summit. It is commonly administered in the form of syrup, of which three spoonfuls are given to an adult, or to a child of three years old a tea-spoonful. At the moment of administration it is customary to add a spoonful of cold water and a few drops of lemon-juice.

The same dose is repeated for three days, and then a mild purgative is given. A singular effect of the medicine is sometimes the production of a slight amaurosis, when it is administered under the influence of solar or artificial light. Amongst the most remarkable properties of this remedy the author enumerates the following:—Its action is always efficacious: it is agreeable to the taste, and children always take it without evincing any repugnance. Enjoying a sedative property, it calms the nervous symptoms which so frequently complicate the verminous disorders of childhood. It is not calculated to produce or aggravate inflammation of the intestinal canal, and may therefore be administered in cases where most other anthelmintics are inadmissible. However, it is prudent not to administer it whenever there are any symptoms of cerebral congestion; for it is a narcotic acrid poison, and if given in too strong a dose, may occasion severe accidents. The action of the plant generally takes place on the second, or even the first day after its administration. The author supports this assertion by an enumeration of cases in which the efficacy of the remedy as an anthelmintic is fully established; and says, it is administered with confidence by all the inhabitants and practitioners of the Antilles and Martinique.—*Lancet, from Gaz. Méd.*

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25. *Active Principle of Sarsaparilla.*—M. Batka attributes the properties of sarsaparilla to a peculiar acid, to which he has given the name of parillinic. In the state of hydrate, this acid resembles fish scales; melted it might be taken for a resin. It reddens litmus paper, and dissolves in alcohol, from which it separates in a crystallized state by evaporation; it is very little soluble in cold water, but dissolves very readily in boiling water, to which it communicates the property of foaming. The chlorate of calcium and of mineral acids, such as hydrochloric acid, precipitate it in gelatinous flocculi. Nitric acid dissolves it without changing its nature. It forms with the alkalies soluble combinations, uncrystallizable, and which communicate to water the property of frothing, like the infusions of sarsaparilla. In order to obtain parillinic acid, M. Batka prepared an extract of sarsaparilla with pure alcohol, treated this extract with boiling water, which dissolves the parillinic acid, evaporated to dryness, and redissolved the residue by hydrochloric acid; the parillinic acid separates in flocculi, which he washes, and afterwards dries.—*Journal de Pharmacie, Dec.* 1833.

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26. *Extract of Guaiacum.*—M. Soubeiran has published in the January No. (1834,) of the *Journal de Pharmacie,* some observations on the extracts of guaiacum, which merit the attention of practitioners. The wood of the guaiacum is very resinous, and on the contrary contains but a very small portion of extractive matter and gum, which therapeutic experiments have not shown to possess very marked properties. It results that cold water dissolves but little of the guaiacum, and that it cannot be dissolved in any great quantity except by long boiling, during which the extractive matters dissolve in some degree the masses of resin which have been softened and detached by boiling. Hence we must conclude, that to derive any effects from watery drinks prepared with the guaiacum, this substance must be employed in large quantities, divided in very small pieces, and long boiled. The different formulæ recommend the extract of guaiacum to be prepared by decoction, and the resinous deposit which forms as the evaporation proceeds, to be carefully separated. It is evident from the above, that the extract thus obtained is entirely destitute of resin, that is, of the most active principle of guaiacum. It is better as recommended by the Geneva pharmacopœia not to separate the deposit which forms during the evaporation, but to divide it, on the contrary, in the extract by means of a small quantity of alcohol, or to use only the resin of guaiacum, or the decoction itself, which in fact is but a particular mode of obtaining the resin of the guaiacum diffused in an aqueous vehicle.

27. *Experiments on the Therapeutic Properties of Codeine.*—This new alkaline substance has been recently obtained from opium by M. Robiquet, and its therapeutic effects have been studied at Amiens by M. Barbier, surgeon to the *Hôtel-Dieu* of Amiens, who communicated some observations on them to a late sitting of the *Royal Academy of Medicine.* These efforts seem to establish the chemical specialty of codeine, differing as they evidently do from either opium or morphine. The codeine was administered in the dose of one or two grains. Like opium and all medicinal substances derived from that drug, codeine operates on the nervous system, but its medical influence seems very small on the brain; it makes no impression whatever on the spinal marrow or nerves derived from it, and its whole activity seems to be exhausted on the nervous plexus of the great sympathetic. Thus, in cases of gastralgia, characterized by pain in the epigastric region, and a sensation of burning about that part, with paleness of the countenance, anxiety, &c., condeine has quickly dissipated all the accidents which it is impossible not to refer to the nervous plexus of the great sympathetic. M. Barbier has also seen codeine produce considerable alleviation in cases were the tunics of the stomach were beyond all doubt degenerated. Codeine also produces sleep when given in sufficient quantity, but this sleep differs from that occasioned by opium; it is never accompanied by a sensation of weight in the head, dizziness, &c., nor does its administration ever give rise to cerebral congestion. M. Barbier has been convinced by the observation of several facts that codeine has no influence over the spinal marrow or its nerves. Many patients affected with the gastralgic pains already alluded to, had also neuralgic pains in the head, loins, thighs, &c.; the uneasiness about the abdomen was quickly relieved by the remedy, but the pains in the limbs, back, &c., remained unchanged. This occurred upon so many occasions as to leave no doubt on the subject. It is necessary to remark, that all the patients on whom the codeine was tried, had previously employed, without any benefit, the liquid laudanum of Sydenham. Codeine does not produce any apparent change in the exercise of the circulation or respiration, nor does it disturb the digestive organs or produce constipation. When applied to the skin, it has not given rise to any remarkable phenomena. In one case, two grains were applied to the surface of a recent blister, but the neuralgic pains for which the blister had been employed were not in the least alleviated.—*Lancet and Gaz. Méd.* 8*th March*, 1834.

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28. *First Effect of Cataplasms on the Skin produced forty-eight Hours after their Removal.*—A very interesting example of this is related by T. W. Chevalier, Esq. in the *London Medical Gazette*, of 5th of April last. The patient, when in a state of apoplectic insensibility, had mustard plasters applied to his feet, and their application continued forty-eight hours, because they produced *during that period* no *sensible* effect. They were then removed, and after a second interval of forty-eight hours, and after sensibility was restored, it was observed that the feet first became flushed and inflamed, and presently began to blister upon the soles, the heel, and the instep, to an extent which it was painful to witness.

There are probably few practitioners of any experience who have not witnessed ill effects resulting from the too long application of cataplasms and blisters, especially to patients whose consciousness is dull. The rule usually followed, not to remove sinapisms until they become extremely painful, or until the patients exhibit evidence of feeling them, and of keeping on blisters until they draw, cannot, in many cases, be too strongly reprobated. The worst ulcers, and the most difficult to heal, that we have ever met with, were produced by the patient following the instructions of their physician, to keep on the cataplasm as long as they could bear it.

"I have always observed," says Mr. Chevalier, "in the use of the mustard cataplasms, that its sensible operation on the skin, in unconscious patients, and in such as are suffering, at the time of its application, from *collapse*, is not by any means in direct proportion to the effects which it produces some days after its removal; while, even in patients who can make known their complaints, the impression that will be made by such applications is not to be calculated from the visible and palpable irritation produced by them while applied.

"Besides extensive experience, much science is required to estimate, to any certainty, the consequences of an excoriating application, especially to the skin of young persons. The severest is the safest, as most likely to warn the ignorant practitioner of its imminent effects; but I have seen three children lying dead at once, from blisters kept on for twenty-four hours, because, in that time, they had not raised the cuticle; for when they raised it, which was as long afterwards, the integuments sloughed, and they all three died of the sloughing.*

"A common blister, applied to most persons for six hours only, will rise about the twelfth or eighteenth, although it has been removed at the end of the six; for the irritation, although not *sensibly* affected at that time, is really and effectually accomplished; and we may safely adopt it as a rule, that sinapisms, or any other excoriants, are not to be continued on the body according to their effect while thereon, but according to the general experience of our profession with respect to the irritation they afterwards produce, and that it is an error to continue their application after the period in which they may be reasonably expected to have insured the *future* blush, vesicle, or superficial mortification, expected from them; since, in awaiting their first notable operation on the skin, we may perhaps insure a greater degree of mischief than it is in the power of the ablest practitioner to allay or controul.

"It appears to me, that ignorance of this aphorism, (if I may so call the doctrine I have ventured to promulgate,) and ignorance of the facts on which it rests, have led to the many cruel deaths, inflicted even in this metropolis, not long ago, on patients who were *merely suspected*, or *pretended*, to be liable to internal diseases, removeable by external irritation. In the legitimate use of unguentum antimonii tartarizati, for example, we do not rub it in till the pustules appear, but for so many minutes, in expectation of their future development, and in due time they rise; but if we persevere too long in the infriction of that ointment, of St. John Long's nostra, sinapisms, or any similar remedy, the consequence may be fatal, as has been proved by facts equally notorious and deplorable."

PRACTICE OF MEDICINE.

29. *Treatment of Acute Gastritis.* By WILLIAM STOKES, M. D.—We now come to treat of simple acute gastritis. Here there are three principal indications. One of these is to remove inflammation as speedily as possible. You cannot, as under other circumstances, leave this disease to nature; the organ affected is one of the utmost importance to life; and if you do not cut it short at once, a typhoid state comes on, to which the ordinary and efficient means of antiphlogistic treatment are inapplicable. The first indication then is to cut short the inflammation as speedily as possible. The next thing is to prevent the introduction of any thing into the stomach which will excite the physiological action of that viscus. You are aware that while the stomach is engaged in the process of digestion, its vascularity is very much increased, and that this, which in health is merely a physiological condition, is unaccompanied by any kind of danger. But in a state of disease it proves a source of violent excitement, and superadds very much to the existing inflammation. You must, therefore, be extremely cautious with respect to what enters your patient's stomach, and carefully remove every thing capable of adding to the excitement which

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* "After the sloughing took place, those children were under the best possible care."

always attends gastritis. The third indication in the treatment is to modify and remove the sympathetic or secondary irritations.

Now I shall suppose that we have to treat a case of simple acute gastritis not produced by the swallowing of corrosive poison or indigestible food. Here we have a patient labouring under violent inflammation of one of the most important organs in the body; and the question is, are you to adopt the ordinary and usual mode of stopping inflammation by opening a vein in the arm? I must here state, that we are very much in want of a series of well-established facts to guide our practice on this point, and to inform us how far general bleeding is useful in acute inflammation of the stomach. At the present period, the question is by no means settled, and the practice is uncertain. I believe, however, that when we are called in at an early period of the disease, where the patient is young and robust, the stomach previously healthy, the fever high, and the pain great, we may have recourse to general bleeding with advantage; bearing this in mind, however, that you are not to expect to cut short the inflammation by the use of the lancet. Inflammations of the mucous membrane of the stomach and bowels, and perhaps of the lungs, are not to be overcome at once by the lancet; the only cases in which you can expect to cut short an inflammatory attack are those in which the parenchymatous tissue of an organ, or its serous membrane, is affected. This is a general and important law. You will often be able to cut short a hepatitis or a pneumonia by a single bleeding, but you will not by the same means be able to repress a bronchitis or an inflammation of the mucous membrane of the intestines. If you bleed in gastritis, bleed at an early period; not too largely, or with the expectation of cutting short the inflammation, but in order to prepare your patient for the grand agent in effecting a cure—local bleeding. This is the principle on which you are to employ the lancet.

In the treatment of gastritis there is nothing more useful, nothing more decidedly efficacious, than the free and repeated application of leeches, whether the case be idiopathic, or produced by the swallowing of a corrosive poison. In this treatment of acute gastritis, you will frequently see, perhaps, the most striking instances of the rapid and decided utility of medical treatment; you will see the vomiting subside almost immediately, the epigastric pain and tenderness disappear, the cough and head-ache relieved, the fever subside, and the tongue change after the application of leeches. To remove the symptoms, the best and most effectual means are leeches; and these must be applied again and again, according to the duration and obstinancy of the symptoms. Here I wish to make one remark of importance. From an opinion very prevalent in former times, that pain and inflammation were inseparable, the older practitioners thought that when the pain ceased the inflammation also ceased; and hence many of our predecessors, and I fear some of our contemporaries, never think of reäpplying leeches, no matter what the existing symptoms may be, if pain has been relieved by the first application. Nothing is more erroneous than this practice. It frequently happens that the pain and epigastric tenderness are removed by the first application of leeches, but the breathing is still quick, the fever high, and the thirst ardent. So long as these symptoms remain, the inflammation of the stomach is still going on. The mere subsidence of pain or tenderness of the epigastrium should never prevent us from resorting to the application of leeches. In leeching the belly for inflammation of the stomach or bowels, it is a common practice to apply a poultice over the leech bites, with the view of getting away as much blood as possible. I am not inclined to approve of this practice. The weight of a poultice is frequently troublesome, and the heat produced by it disagreeable; the patients desire cold, and for this purpose they will often throw off their bed-clothes, feeling a degree of relief from exposing the epigastrium to a stream of cool air. Some practitioners have applied pounded ice over the stomach with good effects, as we see it frequently applied to the head with the same results in cases of encephalitis. Again, the application of poultices causes an oozing hæmorrhage, the amount of which it is impossible to calculate, which is often hard to be arrested, and which, in debilitated persons and children, has the effect of lessening the powers of life without removing the original disease. It is much better to leech again and again than to do this. Where there is not much epigastric tenderness you may apply a cupping-glass over the leech bites with advantage, as you can get away as much blood as you choose, and the tendency to after-hæmorrhage from the leech bites is diminished by the application of the cupping-glass. In very young subjects the tendency to obstinate hæmorrhage from leech bites is so great, that many practitioners are afraid to use leeches, and I believe some children have been sacrificed to this fear. The best mode of managing this is, if the leech bites cannot be stopped by the ordinary means, (and in very young children they seldom can,) to stop them at once by the application of caustic. Do not lose time in trying to arrest the flow of blood with flour, or lint, or sticking plaster; wipe the blood off the bite with a piece of soft dry lint, plunge into it a piece of lunar caustic scraped to a point, give it a turn or two, and the whole thing is settled; and you can generally go away with the agreeable consciousness of having prevented all further danger, and without being uneasy lest your patient should bleed to death in your absence.

With respect to the management of the bowels in acute gastritis, a few observations will suffice. You will always have to obviate the effects of constipation; both in the acute and chronic form of the disease there is always more or less constipation; in fact, the same condition of the bowels is generally observed in both. Now, if you attempt to relieve this constipation in acute gastritis, by administering purgatives, you will most certainly do a vast deal of mischief. Nothing can exceed the irritability of the stomach in such cases; the mildest purgatives are instantly rejected, even cold water, or effervescing draughts are often not retained, and a single pill or powder is frequently thrown up the moment it is swallowed. Under such circumstances, it is plain that the administration of purgative medicine is totally out of the question. Even though the stomach should retain the purgative, you purchase its operation at too dear a price; for it invariably proves a source of violent exacerbation, kindling fresh inflammation in an organ already too much excited. In this state of things the best thing you can employ to remove constipation is a purgative enema, repeating it according to the urgency or necessity of the case. Where there is no inflammation in the lower part of the intestinal canal, you may employ injections of a strong and stimulating nature, with the view not merely of opening the bowels, but also of exercising a powerful revulsive action. I shall mention here an interesting fact, proving that stimulant injections have a decided revulsive effect; and that their influence extends not only to other portions of the intestinal tube, but also to distant parts of the system. In South America, where, from the heat of the climate, and the prevalence of bilious affections, sick head-ache is a very common and distressing symptom, a common mode of cure is to throw up the rectum an extraordinary enema, composed of fresh capsicum, and other aromatic stimulants. The irritation which this produces acts as a very efficacious and speedy revulsive, causing the almost immediate removal of the cerebral symptoms.

In those cases of gastritis, where not only purgatives, but even the mildest substances are rejected, the plain common sense rule is to give nothing. Where cold water is borne by the stomach, it may be taken in small quantities, as often as the patient requires it. Solid ice, too, may be given with decided benefit. There is a mistake which prevails with respect to the employment of ice in gastritis, which I wish to correct. Some persons object to its use, and reason in this way:—persons who have taken a quantity of cold water, or ice, when heated by exercise, have been frequently attacked with gastritis and fever, and consequently the use of these substances must be attended with danger in case of gastric inflammation. This, however, is false reasoning; you need not be afraid to order your patient ice ad libitum; depend upon it, there is no danger in employing either ice or cold water in gastritis. There is nothing so grateful to the patient as ice. Let a quantity of it be broken up into small pieces about the size of a walnut; let your patient take one of these pieces, and having held it in his mouth for a few moments to soften down its angles, let him swallow it whole. The effect produced by this on the inflamed surface of the stomach is exceedingly grateful, and the patient has scarcely swallowed one portion when he calls for another with avidity. It will be no harm, gentlemen, if I should here mention to you a secret worth knowing. There are few things so good for that miserable sickness of the stomach, which some of you may have felt after a night's jollification with a set of pleasant fellows, as a glass of ice; Byron's hock and soda-water are nothing to it.

After the first violent symptoms of the disease have been subdued, I believe the very best thing which can be given is cold chicken broth. The point which we are always to keep in view is to remove inflammation from the stomach, and this should regulate the use of every thing taken into the stomach. I believe we might derive much advantage from anodyne injections in gastritis. I cannot say that I have ever employed them in such cases; but if I were to reason from their utility in other forms of abdominal inflammation, I should be induced to look upon them as entitled to some consideration. There is another point to which I will briefly advert. In the treatment of acute gastritis, there is nothing more commonly used than effervescing draughts; yet I have frequently seen them produce distinct irritation of the stomach. In cases where gastric irritability is excessive, I would not advise you to give effervescing draughts, or if you do, watch their immediate effect; see how the first one has agreed with the stomach before you venture to give any more. Patients labouring under this disease should be kept extremely quiet, as frequently a slight motion brings back the vomiting. Every thing which is swallowed should be in small quantity; a large quantity of any substance frequently causes a return of the vomiting, by distending and irritating the stomach. One of the best things you can give, and the best way of giving it, is iced lemonade, giving a table-spoonful from time to time. The extremities, which are generally cold in cases of intestinal disease, should be swathed in warm flannel.

I shall mention here a rule which should be carefully observed in the after-treatment. A patient has recovered from the violent symptoms of the disease; the fever, thirst, pain, epigastric tenderness, and sympathetic affections have subsided; but he still is confined to bed, and in a state of great debility. Some patients under these circumstances have been unfortunately lost by allowing them to sit up in bed, or on the night chair. The nurse will sometimes, through ignorance, suffer a patient, thus enfeebled, to risk his life by sitting up in bed; sometimes during the course of the night she is overcome by sleep; the patient has a call to empty his bowels; and not wishing to disturb her, attempts to get up, and is found in some time afterwards sitting on the night chair quite dead. This is an unfortunate termination for the physician, as well as the patient. A German author, Hoffmann, has written a treatise on the danger of the erect position after acute diseases; and in the course of the work, which is a very interesting one, he cites numerous instances of its bad effects. Not very long since, a patient was lost in the Meath Hospital by the nurse allowing him to sit up after a severe attack of enteritis. Such also was the melancholy cause of death in the case of the late Mr. Hewson, one of my best and earliest friends. He got a severe attack, which was subdued with difficulty, and his convalescence was doubtful and protracted. One night, in the absence of his attendant, he got up for the purpose of emptying his bowels, and was found some time afterwards on the night chair nearly dead. He was immediately brought back to bed, and the necessary means employed to relieve him, but without much benefit, for he never recovered the effect produced on his debilitated frame.—*Lond. Med. and Surg. Journ. January 18th*, 1834.

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30. *Treatment of Chronic Gastritis.* By WILLIAM STOKES, M. D.—[Extracted

from Lectures on Practice of Medicine.]—The first thing you should do, when called to treat a case of dyspepsia, is to ascertain whether it be a purely nervous disease, or a chronic gastritis. The majority of practitioners give themselves no trouble about this matter, not recognising the fact, that, of the number of dyspeptic persons who seek for medical advice, a considerable proportion are really labouring under a chronic gastritis, and forgetting that in consequence of long-continued functional injury, what was at first but a mere nervous derangement may afterwards become complicated with organic disease. You must also bear in mind, that the stomach is perhaps placed under more unfavourable circumstances for bringing about a cure than any other organ, because the life of the individuals demands that the stomach, though in a state of inflammation, should still continue to perform its functions. In treating diseases of other organs, you will have the advantage of a comparative state of rest, but in a case of the stomach, if you wish to preserve life, you cannot prohibit nutriment, and consequently you must run the risk of keeping up these periodic vascularities which its condition requires, which, though harmless in health, become a source of evil when the stomach is diseased. The obvious deduction from this is, that the cure of a chronic gastritis depends as much upon regimen as upon medical treatment, and particularly where the symptoms have arisen from long-continued excitement, as in the case of persons who live highly. Here the treatment chiefly depends on regulating the diet, and if your patient has sense enough to live sparingly for a few weeks or months, you may be able to effect a cure without other treatment. The great error is, that most practitioners attempt to cure the disease by specifics, and when these fail, they then go to the symptomatic treatment, prescribing sometimes for acidity, sometimes for nausea, sometimes for flatulence, sometimes for constipation, or "the liver," or debility.

You should be careful in the examination of such cases, and should try to ascertain, whether these symptoms may not depend upon inflammation of the stomach; for as long as the patient is in this state, the less you have recourse to symptomatic or specific treatment the better. It is hard to mention one single medicine which in this state will not prove stimulant, and if the stomach be unfit for stimulants, it must be unfit for the generality of medicines. There are numbers of cases of persons labouring under chronic gastritis, which have been cured by strict regulation of diet, and by avoiding every article of food requiring strong digestive powers. We find that articles of diet vary very much in this respect; some are digested with ease, some with pain. We might express this otherwise, by saying, that some require very little excitement of the stomach, and others very great vascular excitement. Patients in this irritable state of stomach, can scarcely bear any kind of ingesta; and when you consider the great vascularity, thickening of the mucous membrane, and tendency to organic disease, you will be induced to think that every thing entering the stomach should be of the mildest kind, and not requiring any powerful determination of blood to that organ.

If you continually prescribe for symptoms, neglecting or overlooking the real nature of the disease, giving arsenic to excite the system, and iron to remove anæmia, and bitter tonics to improve the appetite, and alkaline remedies for acidity, and carminatives to expel flatus, you will do no good; you may chance to give relief to-day, and find your patient worse to-morrow; and at last he will die, and you may be disgraced. On opening the stomach after death, you are astonished to find extensive ulceration, or perhaps cancerous disease. Very often, in such cases, practitioners say that it is cancerous disease, and that no good can be done. But the thing is to be able to know, when you are called to a case, whether it is a case of mere nervous dyspepsia, or chronic inflammation of the stomach. Some of the best pathologists think that most of the cancerous affections of the stomach are in the beginning only chronic inflammations of that organ.

I believe we have not yet in this country adopted the plan of moderate application of leeches to the epigastrium in cases of chronic gastritis. I have seen in many cases great benefit result from the repeated application of a small number of leeches to the epigastrium, at intervals of two or three days. Here is a point which you will find very useful in practice. You will meet with cases which have lasted for a long time; cases where there is strong evidence of organic disease, and which have resisted the ordinary dyspeptic treatment. You will be called frequently to treat these three different cases, where the disease has been of long duration, where there is distinct evidence of organic disease, and where the disease has resisted the ordinary dyspeptic treatment. Here is a case of a patient labouring under what is called indigestion, and which has resisted the stimulant, and tonic, and purgative treatment.—Here is one fact. In the next place, the disease is chronic, and the probability is, that there is inflammation, and consequently that there is chronic gastritis. Now if, in such a case, you omit all medicine by the mouth, apply leeches to the epigastrium, keep the bowels open by injections, and regulate the diet, you will often do a vast deal of good. I have seen, under this treatment, the tongue clean, the pain and tenderness of the epigastrium subside, the acidity, thirst, nausea, and flatulence removed, the power of digestion restored, and all the symptoms for which alkalies, and acids, and tonics, and purgatives were prescribed, vanish under treatment calculated to remove chronic inflammation of the stomach.

What is next in importance to regulated regimen and local bleeding?—A careful attention to the bowels, which in chronic gastritis are generally constipated, and this has a tendency to keep up disease in the upper part of the digestive tube. Is this to be obviated by introducing purgative medicine into the stomach?—No. If you introduce strong purgative medicine by the mouth, you will do a great deal of mischief. You must open the bowels by enemata, or if you give medicine by the mouth, by the mildest laxatives in a state of great dilution. A little castor oil, given every third or fourth day, or a little rhubarb with some of the neutral salts, will answer in most cases. The diet, too, can be managed, so as to have a gently laxative effect. The use of injections is, however, what I principally rely on. I have seen many cases of gastritis cured by the total omission of all medicine by the mouth, by giving up every article of food which disagreed with the stomach, and by the use of warm water enemata. I have seen this treatment relieve and cure persons whose sufferings had lasted for years previous to its employment, and who had been considered by eminent practitioners to labour under organic disease of an incurable nature. It is important that you should bear this in mind. The old purgative and mercurial treatment of gastritis, I am happy to say, is rapidly declining; and British practitioners are now convinced, that they cannot cure every form of dyspepsia by the old mode of treatment. I do not deny that many diseases of the digestive tube may be benefited by the mild use of mercury and laxatives, but I think I have every reasonable and scientific practitioner with me in condemning the unscientific routine practice, which was followed by those who took the writings of Abernethy and Hamilton for their guide. I do not say that, where cases of gastric inflammation, treated after the plan of Mr. Abernethy, have proved fatal, the medicines have destroyed life; I merely assert that the patients died of inflammation, over which these medicines had no controul; and the error lay in mistaking and overlooking the actual disease, as much as in its maltreatment. You will find some practitioners, (they are becoming fewer in number every day,) who seem to have but two ideas, the one a purgative, the other a pot full of fæces; but the connecting link,—the gastro-enteric mucous membrane,—that vast expansion, so complicated, so delicate, so important, seems to be totally forgotten. But practitioners are now beginning to see that purgatives are not to be employed empirically; that they should be administered in many cases with great caution, and with a due attention to the actual condition of the alimentary canal, and that they have been a source of great abuse in the medical practice of these countries.

Next to leeching and a proper regulation of the bowels is the employment of gentle and long-continued counter-irritation over the stomach. This may be effected by the repeated application of small blisters, or by the use of tartar emetic ointment. I have been in the habit of impressing upon the class, that the tartar emetic ointment used in these countries is too strong, the consequence of which is an eruption of large pustules, which are excessively painful, and often accompanied with such disturbance of the constipation as amounts to symptomatic fever. In fact, tartar emetic ointment of the ordinary strength produces so much irritation, that few patients will submit to it long. The form which I recommend you to employ is the following:—Take seven drachms of prepared lard, and instead of a drachm of tartar emetic, which is the usual quantity, take half a drachm, directing in your prescription, (this is a point of importance,) that it be reduced to an impalpable powder; and you may add to it what will increase its action, one drachm of mercurial ointment. This produces a crop of small pustules, which give but little pain and are easily borne; and the counter-irritation may be kept up in this way for a considerable time, by stopping for a few days, until the eruption fades away, and then renewing the friction. I have often seen the utility of this remedy exemplified in cases of chronic gastritis, where the symptoms of gastric irritation, which had subsided under the employment of friction with tartar emetic ointment, returned when it was left off, and again vanished when it was resumed. The case of the celebrated anatomist, Beclard, furnishes a very remarkable proof of the value of a well-regulated diet and repeated counter-irritation in the treatment of this disease. While he was engaged in the ardent prosecution of his professional studies he got an affection of the stomach, which he considered to be a chronic gastritis, and immediately put himself under a strict regimen, using at the same time repeated counter-irritation. He kept up the counter-irritant plan for a considerable length of time, for he found that, when he discontinued it, the gastric symptoms had a tendency to return. In this way he got completely rid of the disease. Several years afterwards he died of an attack of erysipelas; and on opening his stomach, the cicatrix of an old ulcer was discovered in the vicinity of the pylorus, which was exactly the spot to which he had referred his pain during the continuance of his gastric affection.

Gentlemen, there is perhaps no science in which the motto "*medio tutissimus ibis*" is of more extensive application than in medicine. Some physicians on the continent, particularly the disciples of Broussais, having repeatedly witnessed the advantages of strict regimen and local depletion in chronic gastritis, have pushed this practice too far. They seemed to forget that the system requires support and nutrition, which can be effected only through the agency of the stomach; they saw the evils which result from the use of stimulating food in cases of chronic gastritis; and looking to these alone, they ran into the opposite extreme, the consequence of which was, that they kept their patients so long upon low diet, that they actually produced the very symptoms which they wished to remove. The patients became dyspeptic from real debility of the stomach and the whole frame. You remember a general law of pathology to which I have alluded on a former occasion, and which I shall again mention, as it illustrates this point, namely, that opposite states of the economy may be accompanied by the same symptoms. Thus we observe, that palpitation may depend on two different causes—on a sthenic or asthenic condition—on the presence of too much or too little blood in the heart. Now, it frequently happened that patients labouring under chronic gastritis, and who had been treated for a long time after the strict plan adopted by the Broussaists, finding themselves not at all improved, went to other physicians who had different views, and were rapidly cured, by being put upon a full nutritious diet. In this way numerous cases, which water diet and depletion had only aggravated, were relieved, and the consequence was, that a mass of facts was brought forward and published, not long since, by a French author, against the antiphlogistic treatment of dyspepsia and chronic gastritis. It must be stated, however, that the cases which he published were chiefly those in which the depleting system had been carried to excess, and that they cannot, therefore, be received as proofs of the value of a stimulating diet in the treatment of chronic inflammation of the stomach. Bear this in mind; the sooner you can put your patient on a nutritious diet the better will it be for him. It would be absurd to keep a patient for many months, as the Broussaists have done, on slops and gum-water. It will be necessary for you to feel your way and improve the diet gradually. Commence by giving a small quantity of mild nutritious food; if your patient bears it well, you can go on; if the gastric symptoms return you can easily stop. If a small portion of the milder species of food rests quietly on the stomach, you may increase it the next day or the day after, and thus you proceed to more solid and nutritious aliment, until the tone of your patient's stomach regains the standard of health. Never lose sight of this fact, that you may have a case of dyspepsia depending on a chronic gastritis, in which, though you remove the *inflammation* by a strict antiphlogistic treatment, you may not by this remove the *dyspepsia;* and if you continue to leech, and blister, and starve your patient *after the inflammatory state be removed,* you will do great injury. Such a patient, falling into the hands of another practitioner who treated him on a different system, might be relieved, and his case quoted against you and your treatment, though this, at the commencement, was judicious and proper.

With respect to internal remedies, the school of Broussais think that there is nothing required but cold water and gum. This is going too far. In a former lecture I have drawn your attention to the fact, that in the treatment of acute inflammation there is a point where antiphlogistics should cease, and where tonics and stimulants are the most efficient means of cure. Of this fact the disciples of Broussais appear to be ignorant, and they consequently declared against every remedy for chronic gastritis except leeches and cold water. Now is this right? I think not. We find that, in all cases of gastric inflammation, a change in medication seems to be useful at some period of the disease, that is, a change from antiphlogistics to tonics and stimulants, and I believe that in cases of chronic gastritis these remedies may be used with very great advantage, having, of course, premised depletion and counter-irritants. I believe too, that most of the remedies, which we see every day unsuccessfully employed, would have acted beneficially, if the preparatory treatment which I have mentioned had been adopted. Among the best remedies of this kind is the oxide of bismuth; I have seen more benefit from the use of this than of any other medicine, after the treatment already alluded to. Generally speaking, the list of internal remedies for chronic gastritis is very small, but after the use of antiphlogistics you may prescribe the vegetable tonics and oxide of bismuth with advantage. The most decidedly valuable remedy, however, in the after stage of a chronic gastritis is the acetate of morphia, which I am convinced has a very powerful effect in allaying chronic irritation of the stomach. Dr. Bardsley of Manchester, in one of his published works, entitled "Hospital Facts and Observations," adduces many cases of gastric irritation which were completely relieved by the use of this remedy, and I am perfectly satisfied of the truth of his statements. It may be said that Dr. Bardsley's cases were only instances of dyspepsia. But as his cases were extremely numerous, some of them of long standing, and the symptoms very severe, the great probability is, that some of them at least must have been cases of chronic gastritis. I know very few books, the perusal of which I would more strongly recommend to you, than Dr. Bardsley's accurate and instructive work. The great besetting sin of medical writers is, that their statements of successful practice are grounded on a very limited number of cases, or that, in publishing the result of their practical investigations, they only give their successful cases, and leave out those in which the treatment recommended has been found inefficacious. Yet this is a circumstances which should never be neglected. If a man declares that he has discovered a cure for gastritis, or dyspepsia, and brings forward one hundred cases in which the remedy has done good, the statement is still unsatisfactory and insufficient, because there may be one thousand cases in which it has totally failed. Unless he comes forward and gives both his successful and unsuccessful cases, of what value are his statements? Dr. Bardsley, with the candour and good sense which always characterize the philosophic inquirer, gives the result of *all* his cases, forms them into tables, and then leaves his readers to judge for themselves. From an inspection of these tables, you will be convinced of the efficacy of acetate of morphia in the treatment of chronic gastritis. I have been in the habit of using it with the most gratifying results after leeching, regulating the diet, and paying proper attention to the state of the bowels. There are some forms of the disease in which it is more useful than others. The particular form in which it proves most serviceable, is where there is a copious secretion of acid from the stomach, (that form in which all kinds of alkalies have been exhibited,) where severe pain and constant acidity are the prominent symptoms. Here I have seen the acetate of morphia act exceedingly well. You may begin with one-twelfth of a grain, made into a pill with crumb of bread, or conserve of roses, twice a-day; the next day you may order it to be taken three times, and you may go on in this way until you make the patient take from half a grain to a grain and a half in the twenty-four hours. I shall here mention the circumstances of a case, which I do not mean to bring forward as an instance of cure, but as an illustration of the extraordinary power which acetate of morphia possesses in relieving gastric irritation. A gentleman of strong mind and highly cultivated intellectual powers, which he kept in constant exercise, got a severe chronic gastritis: his appetite completely declined; he had frequent vomiting of sour matter; fœtid eructations; and such violent pain in the stomach, that he used, when the attack came on, to throw himself on the ground, and roll about in a state of indescribable agony. He applied to various practitioners, had several consultations on his case, and the opinion of the most eminent medical men was, that he had incurable cancerous disease of the stomach. These symptoms continued for several years, but for the last two or three years they were quite intolerable. He had repeated cold sweats, vomited every thing he took, even cold water, was reduced to a skeleton, and led a life of complete torture. Under such circumstances he tried, for the first time, by my advice, the acetate of morphia. He tried it first in doses of one-tenth of a grain three times a-day, and experienced the most unexpected relief. On the third day all his bad symptoms were gone. He had no pain, no vomiting, no sweats; his spirits were raised to the highest state of exhilaration, and he thought himself perfectly cured. He went out in the greatest joy, visited all his friends, and told them that he had at last got rid of his tormenting malady. In the evening he joined a supper party, indulged pretty freely, and next morning had a violent hæmatemesis, to which he had been for some time subject. All his old symptoms again made their appearance. He again had recourse to the acetate of morphia, and again immediately experienced relief, but the vomiting of blood again returned, so that he discontinued the remedy. This gentleman is now in the enjoyment of good health. He regulated his diet, left off all medicine by the mouth, used warm water injections, and thus recovered from his supposed cancer.

I do not bring this case forward as an instance of the curative effect of acetate of morphia, but as an instance of its powerful effect in allaying gastric irritation. I could adduce other cases in proof of its value in the treatment of the after stage of chronic gastritis, and particularly of that form in which pain and acidity are the prominent symptoms; but I perceive my time has nearly expired. At my next lecture, I shall give some other particulars connected with this subject, and then proceed to the consideration of diseases of the small intestine.

In speaking of the employment of counter-irritation in cases of chronic gastritis, I forgot to mention the use of friction with croton oil, which has been found beneficial in many cases of chronic inflammation. It has been extensively used by many practitioners in the treatment of chronic affections of the joints, and in various forms of pulmonary disease; and I have employed it myself in some cases of chronic gastritis with benefit. I cannot say that the cases in which I have used it presented all the symptoms of chronic gastritis, but they were certainly cases of chronic gastrodynia, with severe local pain, nausea, and loss of appetite. It is an excellent counter-irritant, and gives very little pain. The mode in which I employ it is this,—take a few drops of croton oil, five or six, for instance, drop them on the epigastrium, and rub them in with a piece of lint or bladder, interposed between your finger and the skin, and the next day you have an eruption of small papulæ, which you can increase at will. There is one interesting circumstance connected with the use of croton oil frictions, which you should be made acquainted with. The liability to produce counter-irritation, seems to depend upon the absorption or non-absorption of the croton oil; if it be absorbed it will purge, but if it be not it will produce counter-irritation. In cases of this kind, therefore, where it produces the necessary degree of irritation in the skin, the chances are, that it will not act disagreeably by bringing on catharsis. I have only seen one case where there were both the eruption and catharsis. This was a gentleman who had lately suffered from dysentery in warm climates.

I may also mention, that in convalescence from an attack of chronic gastritis, you must pay great attention to diet for a long time, because there is no affection of any organ in the body, in which an error in diet so rapidly induces a return of the original symptoms, as in disease of the stomach, while each return of the disease renders the attack more dangerous and unmanageable, until at last disorganization takes place.—*Ibid., Feb. 1st and 8th*, 1834.

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31. *On the Use of Blisters.* By WILLIAM STOKES, M. D. [Extracted from Lectures on the Theory and Practice of Medicine, delivered at the Medical School, Park street, Dublin.]—It is a great error to think that blistering is a matter of course in inflammatory diseases, or that the proper period for their application should not be carefully marked. It is a common idea, that if a blister does no good it will do no harm; that it is probable some benefit may result from its employment, and that you may try it at all events. I need not tell you that all this is wrong, and that we must be guided by exact principles in this as well as in every other part of practical medicine. I am afraid there is a great deal of loose reasoning and empirical practice connected with this subject, even at the present day. Here is the general rule by which you should be invariably guided. No matter what kind of disease you have to deal with, if it be inflammatory, blistering in the early stage of it is decidedly improper. I might amplify this rule, and say, that if the disease be inflammatory and in its early stage, or, if, under such circumstances, the symptoms require the general or local abstraction of blood, blisters cannot be used with propriety. The truth is, that many persons take a very limited view of this subject; they look upon blisters as merely revulsive agents, which, by their action on the surface, have the property of diminishing visceral inflammation. This I am willing to allow is true to a certain extent, but there is abundant evidence to prove, *that blisters have sometimes a direct stimulant effect on the suffering organ.* That this occasionally occurs has been established by many facts in medicine; and I have not the slightest doubt, that the application of a blister over an organ in a state of high inflammatory excitement will certainly be productive of injurious consequences. But if you apply them at the period when stimulation is admissible and useful, (and there will always be such a period in every inflammation,) you then act on just principles, and will generally have the satisfaction of finding your practice successful. The greatest empiricism is sometimes practised in the application of blisters to the head in acute inflammation of the brain. You will see, in Mr. Porter's admirable work on the Pathology of the Larynx, how strongly he is opposed to the early use of blisters in acute laryngitis. Dr. Cheyne, also, may, among many others, be quoted in support of this doctrine.

If there is one system more than another likely to be injured by early blistering, it is the digestive. Broussais says, that blisters should not be applied in any of the stages of acute gastro-enteritis, and that in the early stage their application is the very height of malpractice. I do not go so far as to say that they should not be applied in any period of the disease, for when the skin is cool, the pulse lessened, and the local inflammation so far reduced as not to require the abstraction of any more blood, I think you may employ them with very considerable advantage. I shall again return to the subject of blisters; and will for the present merely remark, that blistering is almost always mismanaged, in consequence of persons who apply them being ignorant of their stimulating effects on organs. They generally allow them to remain on too long, and the consequence of this is often violent excitement of the organ over which they are applied, great constitutional irritation, strangury, and bad sores. The best mode of using them is to direct the person who prepares the blister to cover it with a piece of silver-paper before it is applied, and having put it on with the paper next the skin, to let it remain until a decided sense of smarting is produced, when it should be immediately removed. By adopting this plan, you will save yourself and your patient a great deal of inconvenience; you will have no strangury, stimulation of the whole economy, or excessive local irritation, and the inflamed surface will heal kindly. The mode, (too often practised,) of applying a blister sprinkled all over with an additional quantity of powdered cantharides, and leaving it on for twelve, twenty-four, or even thirty-six hours, particularly in the case of females, is nothing better than horse doctoring. During a seven years' experience in the hospital at Tours, Brettonneau, by attending to this principle, never had a case followed by these troublesome symptoms, and yet he never failed in producing the necessary degree of counter-irritation. The active principle of cantharides, being soluble in oil, exudes through the silver-paper in sufficient quantity to produce the necessary effect on the skin, without exposing the patient to the risk of having too much irritation excited by the direct application of the blistering plaster to the cutaneous surface.—*Ibid, January 25th,* 1834.

32. *On Delirium Tremens.* [Extracted from Dr. Stokes's Lectures on the Practice of Medicine.]—You have seen cases of delirium tremens, but you are not, perhaps, aware that it arises under two opposite classes of causes. In some cases, a patient who is in the habit of taking wine or spirituous liquors every day in considerable quantities, meets with an accident or gets an attack of fever. He is confined to bed, put on an antiphlogistic diet, and in place of wine or whiskey-punch gets whey and barley-water. An attack of delirium tremens comes on, and symptoms of high cerebral excitement appear. Another person, not in the habit of frequent intoxication, takes to what is called a fit of drinking, and is attacked with delirium tremens. In the first case the delirium arises from a want of the customary stimulus, in the second from excess. In each the cause of the disease is different; and consequently, with this view of the subject, it would be a manifest departure from sound practice to treat both cases in the same way. Yet, I believe, this error is frequently committed, even by persons whose authority is high in the medical world, and is part of a system not yet exploded,—*the system of prescribing for names and not for things.* The patient is treated for a disease which has been called delirium tremens, the present symptoms are only attended to, and the cause and origin of the affection are overlooked. What are the true principles of treatment?—In the first variety, where the delirium is produced by a want of the customary stimulus, there is no doubt that patients have been cured by the administration of the usual stimulants, by giving them wine, brandy, and opium. Indeed this seems to be the best mode of treating this form of the disease. But is it proper or admissible in the second variety, where the dilirium is caused by an occasional excess in the use of ardent spirits?—Certainly not. Yet what do we find to be the ordinary practice in hospitals when a patient is admitted under such circum-

stances?—A man, who has been attacked by delirium tremens after a violent debauch, is ordered a quantity of porter, wine, brandy, and opium; and the worse he gets, the more is the quantity of stimulants increased. Now this practice seems to me as ridiculous as the old principle of treating a case of hydrophobia with the hair of the dog that bit. Let us consider what the state of the case is. A large quantity of stimulant liquors have been taken into the stomach, the mucous surface of that organ is in a state of intense irritation, the brain and nervous system are in a highly excited condition from the absorption of alcohol, or in consequence of the excessive sympathetic stimulation to which they have been subjected. Are we to continue this stimulation?—I think not. What would be the obvious and natural result?—Increased gastric irritation, encephalitis, or inflammation of the membranes of the brain. The supervention of inflammatory disease of the brain in delirium tremens is not understood by many practitioners, and they go on administering stimulant after stimulant, totally unconcious that they are bringing on decided cerebral disease. I have witnessed the dissections of a great many persons who died of delirium tremens, and one of the most common results of the dissection was, the discovery of unequivocal marks of inflammation in the brain and stomach. Broussais considers all such cases as merely examples of gastritis, and ridicules British practitioners for inventing "a new disease;" but in this he is certainly wrong, for there have been several cases in which no distinct marks of gastric inflammation could be discovered. In all cases, however, where the delirium supervenes on an excessive debauch, there is more or less of gastritis; and though it may occasionally happen, that a patient under such circumstances may recover under the stimulant treatment, yet I am convinced that the physician will very frequently do harm by adopting it.

This complication of delirium tremens with gastritis is also exceedingly curious in another point of view, as it illustrates how completely the local symptoms are placed in abeyance, and, as it were, lost during the prevalence of strong sympathetic irritation. The patient's belly will not be tender; the tongue may not be red; the symptoms present may be indicative of a mere cerebral affection, and yet intense gastric inflammation may be going on all the time, and all the appearances of cerebral disease be quickly removed by treatment calculated to subdue a gastritis. Is this all theory? No; for we have practised on this principle with the most extraordinary success in the Meath Hospital. We have seen cases of violent outrageous delirium subside under the application of leeches to the epigastrium, and iced water without a single drop of laudanum. I beg of you, if you meet with any cases of delirium tremens under such circumstances, to make trial of this mode of treatment, and record its effects, for it is important that they should be more extensively known. I have seen the whole train of morbid phenomena, the delirium, the sleeplessness, the excessive nervous agitation, all vanish under the application of leeches to the epigastrium. In some cases where after the sleeplessness and delirium were removed by this practice, and the tremors alone remained, we have again applied leeches to the epigastrium, and succeeded in removing the tremors also. On the other hand, where a stimulant plan of treatment was employed, and the patients died, we have most commonly found inflammation in two places, in the stomach, or in the brain or its membranes. The rule, then, is this,—in a case of delirium tremens from the want of a customary stimulus, use the stimulant and opiate treatment; but when it comes on after an occasional violent debauch, such remedies must be extremely improper. Adopt here every thing calculated to remove gastric irritation. We have facts to show that most decided advantage may arise from the application of leeches, even where the symptoms of gastritis are absent.—*Ibid.*

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33. *On Mammary Abscess.*—Dr. Beatty, of Dublin, in a paper in the *Dublin Medical Journal*, for January last, extols the controlling power of tartar emetic in this affection. On the accession of inflammatory symptoms in the breast, after

purging the patient, he administers the tartar emetic in doses of one-sixteenth of a grain, repeated every hour, so as to induce slight nausea. If vomiting is induced, the medicine is to be omitted for an hour or two, and its use then recommenced at longer intervals. In ordinary cases, after twenty-four hours, the pain and fever, Dr. B. says, are usually mitigated, and the breasts are smaller and softer. If these effects are not produced in that time, Dr. B. doubles the dose, provided the stomach will bear it, and it rarely happens that it will not, for Dr. B. says, that he has observed that in those cases which do not yield readily, the stomach is very patient of the medicine.

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34. *On the Treatment of Porrigo Decalvans by Solution of Tartar.* By Dr. H. Beauchamp.—Few affections more frequently baffle the skill of the medical practitioner, or give employment to the nostrum monger, than porrigo decalvans. Our author has some doubt as to the propriety of placing the affection in question in the genus porrigo, but does not stop to offer a new arrangement. He was led to try the effect of tartrite of antimony in this disease, from a conversation with his friend Dr. Carter, an army-surgeon of considerable experience, who had often succeeded with this remedy in restoring the growth of hair that had fallen off in consequence of acute diseases, the use of mercury, &c. The strength of the solution was five grains to an ounce of distilled water. Shortly after this conversation a young lady applied to Dr. B. complaining that her hair fell off from a particular spot of her head. On examination, this part was found to be slightly red, unlike what generally happens, and therefore he thought it proper to apply leeches in the first instance. After the second application the hair began to grow, and there was no necessity for the antimony. After several months the lady returned, with another bald part; but this time the skin was pale. Nevertheless he applied leeches, without any good effect. Afterwards he had recourse to the antimonial solution, which was applied three times a day. The hair grew again, and of the same colour as the rest of the hair.

The next case was that of a young lady from whose head the hair first fell off in spots, but in the course of five or six years, half the head had become bald, in spots, from the size of a sixpence to that of a half-crown. The antimonial solution was then employed, having the remaining hair shaved off. By mistake the solution was made too strong, and brought out a crop of pustules. When these had healed a soft down of hair was perceptible on the affected parts, but of a lighter colour than the remaining hair. The head was again shaved, and the solution of proper strength was ordered. But the anxious mother again applied a strong solution, which brought out a crop of pustules not only on the head, but over nearly the whole body, accompanied by febrile action requiring antiphlogistics. The fever subsided, and the pustules disappeared, except from the head, where the pustules coalesced and formed an immense scab, not unlike those of tinea capitis. The lady bathed in the sea during the summer months, had the head repeatedly shaved, and subsequently recovered completely, having the head covered with a uniform growth of hair.

Even these few instances deserve the notice of the profession, and further trial of the remedy.—*Med. Chirurg. Rev. from Dublin Journ. No. XII.*

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35. *Neuralgia.*—M. Roux, in a memoir in the *Bulletin Générale de Thérapeutique,* for 1832, strongly recommends the external use of the following lotion in neuralgia:—℞. Distilled cherry-laurel water, ℥iv.; Sulphuric ether, ℥j.; Extr. belladonna, ʒij. M.

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36. *Hydrophobia.*—M. Buisson has written to the Paris Academy of Sciences, to claim a paper, which he forwarded so far back as 1823. The paper contained a case of hydrophobia, which was his own; the following is the report of it.

He had visited a woman, who had been suffering under symptoms of hydrophobia for three days. She had constriction of the throat, inability to swallow, abundant secretion of the saliva, and foaming at the mouth. She had been bit by a mad dog forty days previously; she was bled, and died shortly afterwards.

M. Buisson, whose hands were covered with blood, incautiously cleansed them with a towel which had been used to wipe the mouth of the patient. He then had an ulceration upon one of his fingers, yet thought it sufficient to wash off the saliva that adhered with a little water. The ninth day after he was suddenly seized with a pain in his throat and eyes. The saliva was continually discharging into his mouth; the impression of a current of air, the sight of brilliant bodies, gave him a painful sensation; his body appeared to him so light, that he felt as though he could leap to a prodigious height, and experienced a wish to bite, not men, but animals and inanimate bodies. Finally, he drank with difficulty, and the sight of water was still more distressing to him than the pain in his throat. These symptoms recurred every five minutes, and it appeared to him as though the pain commenced in the affected finger, and extended thence up to the shoulder.

From the whole of the symptoms, he judged himself affected with hydrophobia, and resolved to terminate his life by stifling himself in a vapour bath. Having entered one for this purpose, he caused the heat to be raised to 42°, (107° 36′ Fah.) when he was equally surprised and delighted to find himself free from all complaint. He left the bathing-room well, dined heartily, and drank more than usual. Since that time he has treated in the same manner more than eighty persons bitten, in four of whom the symptoms had declared themselves bad, and in no case has he failed, except in that of one child, seven years old, who died in the bath. The mode of treatment he recommends is, that the person bit should take a certain number of vapour baths, (commonly called Rousseau,) and should induce every night a violent perspiration, by wrapping himself in flannels, and covering himself with a feather bed, the transpiration to be favoured by drinking plentifully of a warm decoction of sarsaparilla. M. Bouisson declares himself so convinced of the efficacy of this treatment, that he will suffer himself to be inoculated with the disease, and as a proof of the utility of copious and continued perspiration he relates the following anecdote.

A relative of the musician Grétry was bitten by a mad dog, with many other persons, who all died of hydrophobia. For his part, feeling the first symptoms of the disease, he took to dancing night and day, saying *that he wished to die gaily*. He recovered.

M. Buisson also draws attention to the fact, that the animals in whom this madness is most frequently found to develope itself spontaneously, are dogs, wolves, and foxes, which never perspire.

37. *Tracheotomy in the Last Stage of Croup.*—M. Trousseau, in an interesting paper on this subject, in the second number of the *Journal des Connaissances Médico-Chirurgicales*, states that there has come to his knowledge twenty-one cases of croup in which tracheotomy was performed in the last stage of the disease, and seven of them were saved, viz. five by M. Bretonneau, one by M. Bulliard, and one by himself. As in those twenty-one cases the operation was not performed until death seemed inevitable, and there remained no other means of safety, he thinks that it is the duty of a conscientious practitioner not to neglect a dernier resource, which finally leaves still some chance. The operation is easily performed, and rarely dangerous, he adds, since of the twenty-one cases operated on, not one experienced the least accident.

OPHTHALMOLOGY.

38. *Observations and Reflexions upon Amaurosis, communicated by* M. A. Berton, *First Assistant Surgeon to the Municipal Guard of Paris.*—Richter assigns three orders of causes as operating in the production of amaurosis. The first

comprehends those which determine a plethora or turgescence of the sanguine vessels of the brain, retina, and optic nerve, which state he supposes produces a certain degree of compression of these organs. The second includes those causes which operate in debilitating the economy of the organ of vision alone. There is nothing, according to this author, that tends more certainly to enfeeble the forces of these organs than the fatigue incident to their exposure to brilliant objects, (the reflexion from a bright light for instance;) the absolute fixedness of vision necessary in the examination of minute objects, operates in the same way. He cites a case of a person, who, in being obliged to pass over a portion of country covered with snow, found himself suddenly attacked with amaurosis, and another in which the disease was occasioned by the patient having been exposed to the reflexion from a brilliant flash of lightning. Professor Beer is also of opinion that this class of causes operate in producing the disease. In the third order of causes are ranged all those irritations which affect in an inexplicable manner the optic nerve, rendering it insensible to the impression of light. Several of these irritations are supposed to have their seat in the abdominal viscera, whence they radiate, affecting the eyes sympathetically. In the true and simple amaurosis of Beer, we have only the vital properties of the optic nerve and retina affected, and the affection depends either upon an excess of vitality, or better, of sensibility of these nervous portions; or upon a debility of this vitality or sensibility. The first variety of this species of amaurosis always depends upon a determination of blood to the head and eyes, which exercises a manifest influence over the primary formation of the disease. All those circumstances, which tend to produce either general debility or debility of the eyes alone, are the causes more or less determinant of the second species. In the interesting clinical lectures of Dr. Lichel, published in the Lancet, (No. 64,) we are told, "that all cases of amaurosis, which are not symptomatic of the disease of some other organ than that of vision, (that is to say, that are not sympathetic,) may most generally be reduced to two classes, the one in which the disease depends upon the existence of an irritative or sanguineous congestion, or even an inflammation, either of the choroid membrane, the retina, or optic nerve; the other, where it is brought about by a paralysis more or less complete of the last mentioned nervous divisions." These explanations, and those given by most writers upon diseases of the eye, relative to the etiology of the disease, differ but little from each other. Considering them then, as being the most generally received as correct, we shall go on to the consideration of the following cases, and try to discover to which order of causes they are most strictly to be referred.

Observation 1.—The subject of this case was a young woman, aged twenty-four years, of a good constitution, possessing no traits of the lymphatic temperament, perfectly regular, enjoying at the time excellent health, and who had, moreover, never suffered from any indisposition. Jumping up suddenly one night, she placed herself at a window looking into a street, in which there happened to be a very bright light. All at once she experienced a very extraordinary sensation in the right eye, and was struck with surprise and terror upon finding that in a few moments the lid of that side involuntarily closed itself, and that vision in that eye was very imperfectly performed. Leeches, blisters, irritating frictions upon the temples, were all prescribed, but without producing the slightest amelioration in the symptoms. I was not called to the patient until about the fifteenth day after the occurrence of the attack. At that period the right lid was incapable of any motion whatsoever, and fell down over the eye as soon as the force applied to raise it was removed. It nevertheless retained its sensibility, and the slightest touch upon its surface was perceived. The eye looked outwardly, and its pupil was dilated and but slightly contractile. In the other eye, which was, moreover, in a perfectly physiological condition, vision was performed in a very imperfect manner, objects appearing as if seen through gauze. When examined with both eyes every thing appeared double. For some days past she had suffered from a slight cephalalgia located near the right coronal region. The double vision resulted in this case from a deviation of the visual axis, and this deviation was dependent upon the disease being confined to but one eye. Richter considers strabismus as being the most certain diagnostic in amaurosis. Beer, who also considers this phenomenon as being usually present in similar circumstances, explains it by observing, that it results from the eye of the patient never resting or fixing itself upon an object. It seems to me, however, that we may, with at least as much propriety, refer the cause to the disease itself, or to an extension of it: in the first place, this phenomenon is never observed except in those cases in which amaurosis is incomplete, where certain portions only of the retina, (particularly the median,) have been attacked with paralysis. The other portions of this nervous expansion, still remaining sensible to the influence of the light, will instinctively turn towards the field of vision, in order to receive the impression of the luminous rays. According to another hypothesis, the strabismus results from a paralysis of some motor muscle of the eye, whereby a want of antagonism takes place. We can as easily conceive how one of the straight muscles may become paralyzed, as that the levator of the lid should lose its power of contracting. However this may be, I am of opinion that the preceding case should be referred to the second division of Richter. I recollect, in fact, similar cases that he has cited; among others, that of a person labouring under ecstasy, who, upon being exposed to the reflexions of light from the disc of the moon was attacked with amaurosis. Considering the youth and strength of the patient, as well as the insufficiency of the two or three previous leechings, I insisted upon a repetition of the sanguine emissions, and also the exhibition of revulsive remedies addressed to the intestinal canal. Having obtained no amelioration in the symptoms whatever towards the end of the eighth day, I thought it adviseable to change the plan of treatment, and accordingly prescribed such remedies as promised to stimulate or reexcite the sensibility of the nervous portions of the eye, and irritating frictions to the temples, forehead, and even to the lid itself, were employed; she was also ordered to take the pills of Meglin, to have a large blister applied to the nucha, and to take a vomit, (a remedy by the by I should have feared to prescribe had I supposed that the affection depended upon plethora of the vessels, as it would in such a case have proved hurtful, by determining a greater quantity of blood to the part diseased.) In less than a week a remarkable improvement in all the symptoms manifested itself; the lid opened of its own accord, and allowed the lower portion of the pupil to be seen, and the affected eye distinguished a little more clearly objects that were placed before it. She remained in this improved condition for some time, without any change for the better, and the progress towards a cure seemed to have stopped at this point. I determined after some days to employ the strychnine; I administered it at first in the dose of a fourth of a grain once a day, and augmented it gradually until she took half a grain night and morning. In ten or twelve days she was completely cured, the visual axes, (which had been daily approaching each other nearer and nearer,) became again perfectly parallel, and there remained neither in the appearance of the eye itself, nor in the performance of its functions, a single trace by which one would be led to suspect the previous existence of the disease.

Observation 2.—The second observation resembles very much the preceding, and was taken about the same time by Dr. Bodson, a relative of mine. The patient, a woman aged about fifty years, who had had several children, and with whom the critical period had passed only a few years, was attacked with amaurosis in both eyes, which came on gradually. When Dr. Bodson was consulted the disease had existed thirty-five days. The lids were closed and paralyzed, the right pupil slightly dilated, and vision imperfect, (objects appearing as if seen through a cloud.) The sight appeared much more confused on the side of the dilated pupil. She had been bled and leeched three times, twice behind the ears, and once upon the internal superior portion of the thighs. She had also used the foot-bath containing mustard, and had taken purgative medicines.

No benefit whatsoever had resulted from this treatment. M. Bodson ordered the superior coronal region to be shaved and blistered, and the other remedies to be continued. From the fourth day after the application of the blister, the lids began to open of themselves, though to no great distance, but several days having elapsed without further improvement, the purgative pills were replaced by some composed of the alcoholic extract of the nux vomica. From this period a daily improvement in all the symptoms took place, and towards the end of the third week a complete cure was effected. The lids having in fact recovered all their former facility of movement, and the sight becoming so perfect that the patient was enabled to resume her occupation with the needle. It would be useless for us to endeavour to demonstrate by means of new details, that which seems evidently to exist from facts already given, viz. that the two preceding cases of amaurosis are not similar in their character to those which depend upon a visceral affection, (sympathetic amaurosis;) nor to those which result from a congestion, irritation, or even an inflammation of the nervous organs essential to the eye, but that they depended upon a paralysis of the nerves, or nervous membranes of the organs of vision; a paralysis which, according to oculists, attacks in a manner more or less complete the optic nerve, the retina, or even the choroid coat itself. Let us observe that the trifacial nerve has not been mentioned, notwithstanding the experiments of Professor Magendie, (the results of which are published in his Précis de Physiologie,) show, 1st, that the winking of the lid depends in part upon the facial nerve, and partly upon a branch of the fifth pair, and that it ceases, or but very rarely takes place, after a division of the latter, and that it ceases entirely always when the facial nerve is divided; 2d, that the section of the optic nerve destroys vision entirely, and that a division of the fifth pair does not entirely destroy the sensibility of the retina, but that a small portion of it remains. From these physiological facts may we not draw the inference, that branches of the fifth pair are the nerves affected in incomplete amaurosis, if not always, at least in those cases complicated with paralysis of the eyelids, as was the case in the two preceding observations?

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39. *Nutrition and Diseases of the Humours of the Eye.*—M. Bourjot, in a memoir communicated to the Royal Academy of Medicine, has endeavoured to show that the formation and renewal of the humours of the eye are due to the action of endosmose and exosmose. The basis of his theory is, that the humours of the eye, having different densities, and being separated by delicate and porous animal tissues, a double current of endosmose and exosmose takes place. He believes that the aqueous humour passes by endosmose through the capsule of the crystalline; that the humour of Morgagni passes through the posterior parietes of the crystalline capsule in the meshes of the vitreous humour; and that this last finally penetrates the parietes of the veins which ramify over the surface of the hyaloid membrane. Finally, he applies this theory to the explanation of the diseases of the humours of the eye, to different cataracts, for example, that the density of these humours vary, consequently their proportions, their circulation changes, and different cataracts form.—*Archives Générales, Oct.* 1833.

SURGERY.

40. *Hydrocele cured by Tincture of Iodine.*—M. P. Record, Surgeon to the *Hôpital des Vénériens*, has employed the tincture of iodine with success in five cases of hydrocele independent of any syphilitic cause. The tincture of iodine is diluted with distilled water, and applied to the tumours by aid of compresses imbibed with it, and in which the scrotum is enveloped. M. Record employs the tincture in four different degrees of concentration:—1st. Tinct. iod. ʒj.; Aq. distill. ℥iij.; 2d. Tinct. iod. ʒij.; Aq. distill. ℥iij.; 3d. Tinct. iod. ʒiij.; Aq.

distill. ℥iij.; 4th. Tinct. iod. ʒvj.; Aq. distill. ℥iij. In subjects whose skin is very delicate and epidermis thin, the last formula is employed. When there is less sensibility and some hardness of the tissues, the other formulæ are employed pro re nata. For the medicine to produce its beneficial effects, the patients must experience a rather vivid but supportable sensation of heat; and without there being burning or vesication, the skin of the scrotum must become brown, or pass into brownish-red, the epidermis becoming like parchment, and forming scales that are detached leaving beneath them a sort of thick transpiration still without vesication. So long as these results are not obtained the dose of the tincture of iodine must be increased, the quantity of distilled water remaining the same; but when these effects have resulted, the tincture of the same degree of concentration must be continued by steeping compresses in it and renewing them twice a day. If pain supervene, the application is suspended for a few days, and its use resumed until the disappearance of the tumour.—*Journal des Connaissances Méd. Chirurg. Jan.* 1833.

41. *Resection of Bones in Ununited Fractures.*—Surgeons have long entertained an opinion with regard to the resection of bones in cases of ununited fractures, which M. Dupuytren considers as very injurious. They imagined it was absolutely necessary to cut out both fragments of the bone before a solid callus could be laid down; hence they avoided this operation in a great number of cases when this resection was extremely difficult if not impossible: thus, for example, they rarely had recourse to it in fractures of the femur, where the fragments frequently ride upon one another; the upper portion is the only one which can generally be got at with facility, while the inferior fragment, carried backwards and inwards, is too deep-seated to be exposed by an incision in this direction, while the presence of important vessels prevents any operation on the inner side of the limb. M. Dupuytren is inclined to hold this opinion as altogether wrong, and maintains that the resection of one fragment is sufficient to obtain the consolidation of both; at least two cases in which he employed this practice turned out successfully.—*Leçons Orales.*

42. *On the Use of the Trepan in Tooth-ache.*—The means generally employed consist in the destruction of the nervous pulp of the tooth by laceration, cauterization, or the application of caustic to the bottom of the carious tooth. Experience proves that it is only necessary to destroy the dental nerve to subdue at once all sensibility in the part. The means employed by M. Fattori, and which experience has proved to him is the best to be relied on, consist in the application of a small trepan on the diseased tooth, after having conveniently fixed the head of the patient. A few turns of the instrument are sufficient to perforate the osseous tissue of the tooth, and the extremity of the trepan immediately divides the nerve which fills up the dental canal. The section made in this way immediately relieves the pain.

The operation, according to the old method of destroying the nerve with a sharp-pointed instrument, seldom succeeded, as the caries rarely allowed of the easy introduction of the instrument into its cavity, and that it was also impossible to divide the nerve in many cases completely, besides causing the patient very severe pain at the time. The operation by the trepan, on the other hand, may be always relied upon, and removes every difficulty in the section of the nerve, as it is applied immediately over the part which the nerve traverses, and is certain of dividing it. The application of heat to the part is not a sure remedy, as the cauterization must be very slight—it gives out heat rapidly, and when applied to the part has only sufficient heat to burn deeply. Some have advised the direction of a flame of hydrogen gas on the part, but it is not necessary to dwell long on the uncertainty of such an application. In using the trephine, there is no risk of wounding any parts of the mouth near the affected tooth; when its application to those which are situated far back, near the ascending ramus of the lower jaw, is facilitated by the use of a *speculum oris*. In using caustic to the teeth, its application cannot be confined to the seat of the injury, and it spreads sometimes to the neighbouring healthy parts, causing and increasing irritation of the dental nerve, and sometimes an inflammation of the tissue of the gums. Nothing of this kind can happen in using the trepan.

This remedy may be used successfully in all affections of the teeth, from whatever cause they may arise; and whilst many other remedial means lead on to the loss of the tooth, the trephine preserves it, in immediately relieving the pain, and preventing its return.

M. Fattori has found the trephine particularly useful in that affection of the teeth which he denominates *internal caries*, where the part is extremely painful, without showing the slightest appearance of alteration in its tissue. It is in such cases that the patient, having borne the pain for a considerable time, consents to the extraction of the tooth, which in being done is frequently broken off, and the fangs, which are often very painful, remain in the alveolar process. When relief does not follow the application of the trephine, the pain which remains is frequently the result of antecedent inflammation in the neighbouring parts, requiring a particular treatment for its relief. It is adviseable after the operation to fill the aperture made by the trephine with lead, to prevent any portions of aliment or other foreign substance from lodging in it, and becoming a fresh source of pain, by irritating the newly-incised nervous surface. This, however, should not be done until some days after the operation, when the parts shall have lost all their sensibility, and the irritation of the neighbouring parts is subdued. The application of the trephine is useful when old stumps of teeth, which cannot be removed, become painful; and finally, it is exempt from all those accidents which attend the extraction of teeth.—*Archiv. Gén.*

43. *Treatment of Fractured Limbs, by Inclosing them in Plaster Moulds, &c.*—The eminent German surgeon DIEFFENBACH is in the habit of treating many cases of fracture, especially of the bones of the leg, by enveloping the limb, or only ¾ths of its circumference with plaster of Paris, after it has been ascertained that the fractured extremities lie in normal apposition with each other. It is of advantage to leave the anterior part of the limb exposed, as we have thereby an opportunity of watching the progress of the cure, and of applying any local remedies which may be necessary, especially when the case is one of compound fracture.

The principle of Dieffenbach's plan, that of an unmoveable apparatus round the broken limb, has been adopted by many surgeons both of ancient and of modern times. It is to that glory of French military surgery, M. Larrey, that we are chiefly indebted for its establishment in present practice. In the Russian campaign, the method was most extensively adopted, and many a limb which had been fractured by gun-shot injuries, and had been thus treated, was found on the return of the poor fellows to France, to have knit together most admirably, although the dressings had never once been removed from the period of the accident.

Larrey's apparatus has also the great advantage of being composed of materials the most simple, cheap, and almost always at command; for all that is required is a quantity of linen, straw, eggs, camphorated spirits, and of cold lead lotion. The mode of its adjustment is little more complicated than the application of a common bandage; and when once secured, the member is comparatively safe, and the patient, instead of being condemned to repose for a lengthened period, may be permitted to rise on the third or fourth day, and move about on crutches. Whatever be the limb which has been fractured, there is little risk of the apparatus being disturbed, even by a long journey; and if the jolting of the carriage be painful or improper, there is nothing to prevent the simultaneous employment of suspension, as proposed by M. Sauter. But often this is not necessary; for in from twenty-four to thirty-six hours, after the apparatus has been applied, it forms a compact, coherent, and accurately fitting mould or case round the whole of the limb, so that no one part of it can be moved without the rest of the limb following the motion; thus all danger of lateral displacement is securely guarded against. It may be supposed that it is less efficacious in counteracting the shortening of the broken limb than some methods of permanent extension; this may possibly be true, but when it is stated that, out of eight cases of fractures of the femur, six were cured, without any shortening of the extremity, the argument cannot form any very potent objection to the practice; and indeed the very fact of all the muscles of the limb being equably and strongly compressed, (for the apparatus should be made to incase the whole of its length,) subdues in a great measure their tendency to contraction, and therefore obviates the tendency of the bones to ride over each other.

But if the immoveable apparatus which we have so strongly praised, and which our readers will find described at length in the 3d vol. of Baron Larrey's Clinique Chirurgicale, and also in an admirable thesis published lately by his son, possessed no other advantages besides the one of permitting the patient to move about safely during the treatment of his fracture, we should deem this sufficient to recommend it to the notice of surgeons; perhaps a case in point will be received as the most satisfactory evidence of the benefits accruing from its adoption.

A man of healthy constitution was admitted into a hospital for a complete fracture of the bones of the leg, about two inches above the malleoli. During six weeks he was treated by the common method, but at the end of that time it was found that union had not taken place. The foot being considerably everted, M. Berard first brought it into its right position, and then retained it there by means of Dupuytren's splints for another month and a half; and although there had been no displacement all this time, there was still a complete failure of any bony union. The immoveable apparatus was now applied; and when this had become sufficiently firm and compact, the man was allowed to get out of bed and walk about the ward on his crutches, without ever putting the broken limb to the ground. After the expiration of six weeks a perfect cure was obtained.—*Med. Chir. Rev. from Archives Générales.*

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44. *On Bony Union of Fractures of the Neck of the Thigh bone.* By Sir ASTLEY COOPER.—I find in a report of Le Baron Dupuytren's lecture, that he attributes to me the opinion, that fractures of the neck of the thigh bone, within the capsular ligament, not only "never unite, but that it is impossible they should unite by bone."

It is quite true that, as a *general principle*, I believe that those fractures unite by ligament, and not by bone, as do those of the patella and olecranon. But I deny that I have ever stated the impossibility of their ossific union; on the contrary, I have given the reason why they occasionally may unite by bone.

The following are my words—"*To deny the possibility of their union, and to maintain that no exception to this general rule may take place, would be presumptuous.*"

I then proceed to state, that the cause of the deficient union is to be found in the reflected ligament of the cervix femoris being torn through, and that thus a defective nutrition of the head of the bone is produced. But I held, that if the reflected ligament remained whole, or was but slightly torn when the bone was broken, it would unite by means of its cancellated structure; but that in such a case the limb would not be shortened in the usual manner, nor would the case have the common characteristics of this accident.

In proof of the truth of these observations, I shall give the following quotation from Mr. Swan's work on the Diseases of the Nerves, page 304.

"CASE.—Mrs. Powell, aged above eighty years, fell down in the afternoon of the 14th of November, 1824. I saw her soon after, and found her complaining very much of pain in the left hip. The limb could be moved in every direction, but this motion produced excessive pain. She lay on her back, with the limb extended; and nothing *was ever done*, except the application of fomentations for the first few days. I believed there was a fracture of the neck of the thigh-bone, although the limb remained quite as long as the other, and I neither perceive a crepitus, nor any altered appearance in its position, except a slight inclination of the toes outwards. She had more constitutional irritation than I ever observed from a similar accident. She suffered much pain in her hip and was in consequence obliged to take an opiate; but she got very little rest. She generally had much thirst. There was the utmost difficulty in keeping her bowels open; and she had great pain and difficulty in making water. She had no appetite for common food, and for three weeks appeared so weak, that she was under the necessity of taking wine and brandy. For some time all her urine and stools were passed in bed, but not involuntarily, and only because she could not be persuaded to use proper means; in consequence, her back became very sore. Latterly she complained of pain in the abdomen, which was very tender on pressure, and made even the weight of the bed-clothes inconvenient. Her tongue became very dry and brown; and in the last twenty-four hours she was insensible. She died on the morning of the 19th of December, about five.

"*Examination.*—This took place at seven in the evening.

"There was some ecchymosis amongst the muscles about the injured part, and in the cellular membrane, about the sciatic and anterior crural nerves. The greatest part of the fracture of the neck of the thigh-bone, which was entirely within the capsular ligament, was firmly united.

"A section was made through the fractured part, and a faint white line was perceived in one portion of the union, but the rest appeared to be entirely bone." Mr. Swan goes on to say, "This beautifully shows the principle which Sir Astley Cooper has advocated—viz. that when the reflected ligament remains whole, and the bones are not drawn asunder, the nourishment to the head of the bone continues, and union will be produced even in the short space of five weeks, by only placing the knee over a pillow, and in other respects leaving the case to nature."

Of the contrary state of the fracture—viz. that in which the reflected ligament is torn—I may give the case sent to me by Mr. Robertson, of Sheerness, in which the patient's limb was extended for six months without any ossific union.

On the 25th of June, 1822, William Durain, aged 62, a tall, athletic convict, of a sanguine temperament, fell, with a very inconsiderable violence, across a piece of timber in the Dock-yard, his left hip coming in contact with the wood. On rising, he felt an acute pain in the region of the acetabulum, but no other inconvenience, for he walked on board to exhibit himself to the surgery-man. From finding him ranked up with the sick of the hulk, on my morning visit of the 26th, from his walking on board, and from his own account of the accident, I did not suspect any serious injury to the joint, and treated the case as one of concussion. On the 29th, however, he complained of a very sudden and very agonizing accession of pain, which induced me to subject him to a more critical examination. No evident alteration in the size of either hip could be discerned, but a shortening of the limb was conspicuous, which was rendered more evident by making him stand upon the sound limb: extension removed this difference; but, on being freed from restraint, it again assumed its morbid shape; the knee and foot were everted, and rotation greatly increased his pain.

I removed him to the hospital, as a case of fracture within the capsule; but a continued attention for a period of six months to position, (chiefly with a view of restraining the motion of the pelvis, and of securing the limb,) made no other alteration in the symptoms than a gradual diminution of pain: a pair of crutches were given him, he was placed on the invalid list, and remained till the 26th of September, when he died from general dropsy. On dissection, the injury proved a transverse fracture of the head of the femur, within the capsular ligament; no species of union had taken place. The upper portion of the fractured bone was retained in situ, by the sound ligament, tolerably smooth upon its surface, but without any ossific deposit.

The lower portion was very irregular, with several detached pieces of bone adhering to the insertion of the capsular ligament. Between the acetabulum and the portion of bone retained in situ by the ligament, were several small oval-shaped, loose cartilaginous substances, apparently fragments of bone; the capsular ligament partially lacerated, in a line above the trochanter major, and greatly thickened in its insertions.

I should not have given you this trouble, nor should I have taken it myself, but for the respect I bear my friend the Baron Dupuytren; for, although I have already submitted myself to be misrepresented by many individuals, yet I should be sorry to be misunderstood by so excellent a surgeon, and so valuable a friend, as le Baron Dupuytren.—*Medical Gazette, April 25th,* 1834.

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45. *Amputation with a Single Flap.*—Dr. Legros recommends for amputations of the thigh and arm the following method, which he conceives to unite the advantages of the flap and circular operations without having the inconveniences of either. The patient and assistants being conveniently arranged, the surgeon grasps with one hand the muscles on the anterior face of the thigh, draws them from the bone; with the other hand he thrusts a knife held flat entirely through so as to separate these muscles from the bone, and forms a semilunar flap of six or seven inches. The operator carries back his knife to the bottom of the flap, which is raised by an assistant, divides the flesh which remains posteriorly, as in the circular method, and saws the bone, rounding if he thinks necessary its upper and lower edge.

Instead of commencing the flap by a puncture, and cutting from within outwards, the operation can be performed by an incision from without inwards, that is, from the skin to the bone.

The single flap may be cut square: if these measures are well taken nothing is easier than to make the lips of the wound meet perfectly.

This plan, as may readily be conceived, may be applied to the arm, however we prefer for this limb the circular method. Without regarding the facility and quickness with which this new plan may be practised, it appears to us to present the following advantages.

The flap unites by its own weight and facilitates by its position union by first intention, which by this manner can be very soon obtained.

The bone placed in the middle under a very considerable portion of flesh, does not tend, as in other methods, to project at the angles of the wound.

The angle being at the lowest point, the fluids flow out of their own accord, and by the most direct passage.

In case of hæmorrhage it is sufficient to raise the flap to discover the vessel from which the blood proceeds, and to twist or to tie it. The principal artery is found at the internal angle, and on a level with the wound.

By this method we avoid the conical form of the stump, the projection and exfoliation of the bone, the dragging caused by the dressings, and the search for the vessels which bleed primarily or secondarily.

The contraction of the stump, separation and gangrene of the skin, are not to be feared, and of phlebitis there is little chance whether originating from inflammation of the veins or the absorption of pus—the surface of the wound being protected from external causes.

The cicatrix in this method is linear, is not in the centre of the limb, it is beyond the reach of external injuries. This position, together with the muscular mass which forms and terminates the stump, facilitates the application of an artificial limb.—*Journal des Connaissances Med. Chirurg. February,* 1834.

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46. *Case of Osteo-sarcoma of the Left Upper Maxillary Bone, in which the whole of the Diseased Bone was Removed.* By M. Blandin. [Reported by M. Laplace.]—The subject of this operation was a female, fifty-five years of age, habitually healthy, and the mother of several children, who enjoy good health; she affirms that she never contracted syphilis, and traces the commencement of her disease to six months back. At this period one of the left upper molar

teeth became spontaneously the seat of excessive pain, loosened, and in a short time fell out, leaving an opening which never closed since. At the same time two small fleshy tumours, as large as a pea, red, and smooth, developed themselves on either side of the fistula, which gave issue to a small quantity of puriform mucus, fetid, and sometimes mixed with blood. A surgeon being now called upon, made some trifling incision, which gave issue to some blood, and from that day the tumours gradually enlarged.

On being received into the hospital, 11th of March last, she presented the following appearance:—At the roof of the mouth there was a red, smooth, fungous tumour, but it was not ulcerated, and did not bleed; this tumour comprehended the whole breadth of the left upper maxillary bone, and occupied from before backwards the alveolar ridge and vault of the palate as far as the insertion of the velum palati. The whole alveolar ridge had disappeared, and was confounded with the body of the tumour, which was as large as the half of a hen's egg. Corresponding with the presumed situation of the second or third molar tooth there was an opening, furnishing a sanious, fetid pus, through which a probe might be passed deeply into the antrum. The left cheek was elevated by the tumour, which seemed to mount up to the base of the orbit in front, and to the side of the nose laterally. The globe of the eye on this side was not displaced; the patient experiences great intermitting pain in the tumour, and has been affected with head-ache, though not laterally; she coughs a little, and expectorates mucus mixed with pus from the alveolar fistula; the general health was not altered.

During the following days the little finger could be introduced into the maxillary sinus through the fistula, and feel some irregular, but smooth fungosities in the interior of that cavity, not a single point of its parietes presented the osseous resistance characteristic of a healthy state; the examination was followed by a discharge of blood; the progress of the tumour latterly had been very rapid; it had exceeded the median line to the right, and gained the inner edge of the right superior maxillary bone.

MM. Marjolin and Blandin, seeing the quick manner in which the osteo-sarcoma advanced, were of opinion that complete removal of the whole superior maxillary bone was necessary, and on the 18th of March, M. Blandin, in the presence of several surgeons, proceeded to the operation.

The patient was retained in a chair by two assistants, and the operator placed himself before her, having on his left all the necessary instruments arranged in perfect order, and under the care of another assistant. The left half of the upper lip was put in a state of tension between the left hand of the operator and an assistant, and an incision was made, commencing over the os malæ, below and outside the external angle of the eye, and dividing the upper lip two or three lines in front of the left commissure. The coronary branches were now tied, and the threads cut close to the knots. The external flap, sufficiently dissected back to expose the anterior edge of the masseter muscle, was committed to an assistant; the internal flap was also dissected from below up, and from without inwards, the wing of the nose was separated from the maxillary bone, and turned up; the corresponding nasal fossa opened in front, outside and below; the perpendicular process of the superior maxillary bone, and the base of the orbit, were exposed. The globe of the eye, with its cellular tissue, separated from the floor and inferior angles of the orbit, was pushed up by a spatula.

During this first period of the operation, the soft parts alone were interested; it now remained to separate the hard parts. The globe of the eye was carefully elevated inwards, together with the internal flap, while the external one was depressed in the opposite direction; a small hand-saw was now placed on the middle of the articulation of the superior maxillary with the malar bone; the flat of the blade being parallel to the median line, and directed from before backwards, regarded the anterior extremity of the inferior orbital fissure in such a manner, that the anterior angle of the os malæ was on the inner side, and the malar process of the superior maxillary bone on the outer side of the cut.

The anterior moiety of the osseous mass placed in front of the inferior orbital fissure being thus divided, the separation was continued as far as the latter fissure, with the gouge. As the instruments were now to be directed against the inferior and inner edge of the orbit, the globe of the eye was raised outwards, and the internal flap turned to the right side. The saw being fixed on the external face of the ascending process of the superior maxillary bone, divided it obliquely from above, downwards, and from without inwards, in an oblique direction, passing through the superior external and inferior internal angles of the orbit, and directed from before backwards toward the posterior third of the spheno-maxillary fissure. The ascending process having been thus divided by the saw, the separation of the bone as far as the spheno-maxillary fissure was completed with the gouge, following precisely the ethmoido-maxillary fissure of the orbit.

The osseous portion which was to be amputated being thus separated superiorly both on the outer and inner sides, still remained attached behind the tuberosity of the maxillary bone, at the vault of the palate and the wall of the nasal fossæ. The internal flap being raised sufficiently, together with the upper lip, the left index finger was introduced deep into the mouth, which was kept open by means of a cork; the finger served to protect the velum palati, and to direct a long strong pair of scissors, which were introduced from before backwards through the nasal fossæ, each fossa receiving a blade; the septum was thus divided parallel to its base, where the vomer is very thin.

The necessary number of teeth were now extracted, and the bistoury traced on the gum and roof of the palate the line which the saw was to follow. This instrument divided the superior alveolar edge parallel to the median line, and from before backwards. The section was completed with the gouge, by which the osseous portion of the roof of the palate was divided in its whole length. The left moiety of the velum palati was now separated from the rest by means of a transverse incision, which, passing along the posterior edge of the horizontal portion of the palatine bone, was directed between the pterygoid process and the maxillary tuberosity. The soft parts being thus divided, the gouge was employed to separate the superior maxillary and palatine bones from the sphenoid, acting obliquely from above downwards, and from without inwards. The tumour was now completely isolated, it could be seized between the fingers, and when all the soft parts were cut through, its removal was terminated.

The result of this operation, in which the internal pterygoid muscle was completely exposed, was the formation of a vast cavity where the left orbit, nasal fossæ, the pharynx, and mouth, all communicated. The parts were now cleaned with a sponge, and some fragments of the orbit and palatine bone, with some fungous excrescences, were removed; the edges of the wound were now brought together with eight strong pins, on which the twisted suture was placed; the cheek did not present any sensible depression.

The consequences of this difficult and long operation did not present any thing remarkable, the termination being most fortunate; there was very little reäction, whether general or local; neither hæmorrhage nor nervous symptoms supervened. During the first few days the patient expectorated some mucus, at the beginning mixed with blood, but soon becoming yellow. On the 21st we observed over the upper eyelid and left cheek a little redness and œdema, but these were quickly dissipated. The patient, whom we could not comprehend at all at first, was soon able to make herself well understood, though the voice was nasal. Finally, she was able to leave the hospital in the beginning of May, when she presented the following appearances:—

On the cheek a simple cicatrix. In the cavity of the mouth, a sort of perforation of the velum palati, establishing a communication between the mouth and nasal fossæ, permits us to see the septum and turbinated bones. This artificial perforation is limited in front by the cheek; behind by the left moiety of the velum palati; its edges are completely cicatrized. The left cheek is a little fallen in, and the left wing of the nose, being drawn closer to the septum than natural, diminishes a little the nostril of that side.

The examination of the tumour which was removed, perfectly confirmed the diagnosis; it was composed of true osteo-sarcomatous tissue, by which the greater part of the bone had been destroyed.

This case of complete removal of the whole of the superior maxillary bone, joined to a few other authentic ones which are recorded within the last years, proves that this operation, though in appearance dangerous and frightful, must take its rank amongst the other great efforts of the art to remove a disease otherwise inevitably mortal.—*Lancet, May 31st,* 1834.

MIDWIFERY.

47. *Destruction of the Neck of the Uterus, with complete absence of the Os Uteri. Vaginal Cæsarian Operation.*—Complete obliteration of the os uteri at the moment of labour is very rarely witnessed by accoucheurs. We find, indeed, in writers, many examples of the kind; but in most of these cases the observer has been led into error by a vicious or elevated position of the neck, which sometimes exists to such an extent, that, without very careful examination, an absence of the uterine orifice might be declared. In the present case, however, the fact of obliteration was established by several celebrated midwifery practitioners, and existed to a degree requiring the vaginal operation, which was performed with complete success.

Case.—On the 4th of December, 1833, Dr. Caffe was called upon by Madame Mauray, sage-femme, to see a lady who had arrived at her establishment the night before, and was at the full period of gestation. This lady, thirty-nine years of age, and of a good constitution, was the mother of three children, all born by easy labours. Her last accouchement took place eight years ago, and gave rise to no accident whatever. The labour-pains had been present for thirty-six hours, without having produced any serous discharge; and the midwife was unable to discover the presence of the os uteri, or even the entrance of the organ.

On making an examination, M. Caffe recognised the following particulars:—The vulvo-uterine diameter of the vagina measured five inches; its superior wall, excessively tumefied, formed a kind of hood which filled a part of the vaginal cavity; the latter was red, and not moistened by mucus; the apex of the vagina terminated suddenly, and might be compared to a cylinder closed above, without any trace of projecting body or uterine neck. Near the median raphe of the posterior wall, the finger touched a fold, about a line broad, giving the sensation of a small cord drawn tensely; but at the sides of this fold, or elsewhere, it was impossible to find the least trace of os uteri, either with the finger, or by guiding a probe-pointed stylet on the latter. During the violent expulsive efforts which took place from time to time, the pulp of the finger experienced the sense of motion communicated to it; but the uterus at the same time remained elevated, without projecting into the vagina.

MM. Hatin, Velpeau, Lenoir, and Larchet, were now called upon to examine the case, and all recognised a complete obliteration of the uterine orifice; an operation was therefore determined upon, and performed in the following manner.

The woman being placed on the edge of her bed, as in the operation for the stone, M. Caffe introduced, on the left index finger, a straight narrow-bladed bistoury, protected by a roll of linen within six lines of its point, and guarded by a ball of wax. Having arrived at the summit of the vagina, the direction of the bistoury was changed from the flat to the perpendicular position, its back being supported by the pulp of the index; and the anterior wall of the uterus was divided, layer by layer, the incisions being made from the rectum towards the bladder, and care being taken not to extend them beyond five lines upwards. When the incisions had been carried to about one-quarter of an inch in depth, the operator arrived at the cavity of the uterus; a very dark, inodorous liquid, about four ounces in quantity, was immediately discharged.

The uterine contractions aided much the divisions made by the bistoury, and in order to avoid any danger of laceration, two lateral incisions were made with a probe-pointed bistoury, one on the right and the other to the left, extending a few lines only; at this moment a contraction of the uterus enlarged the crucial incision thus made and rendered it oval. After the lapse of an hour the labour was terminated, most fortunately, and without any laceration whatever. No foreign substance of any kind was introduced into the wound: the female was able to leave her bed on the sixth day, and on the ninth returned home.

After the cessation of the lochia, M. Caffe took the precaution of introducing on several occasions, into the wound, a gum-elastic catheter, which was there retained for a few hours each time, in order to prevent its closure. This precaution was attended with the desired effect, for since the performance of the operation, the menses have appeared twice, and been discharged without any obstacle. The cause of the obliteration in this case arose from the introduction of an irritating matter into the organ. M. Caffe was informed by the patient, that during the early months of her pregnancy, she had frequently injected, with a gum-elastic tube, a solution of ashes into the vagina, and even into the uterus. Each time this manœuvre was performed, the woman was seized with intolerable pain, and the injections gave rise to a discharge of pus from the vagina, mixed with some pellicles. The woman did not complain of any pain during the operation, which was extremely simple, and followed by no accident or inflammatory symptoms; and the division of the uterine parietes did not give rise to the slightest hæmorrhage.—*Journal Hebdom. March*, 1834.

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48. *Case of Accumulation of Air in the Uterus simulating Pregnancy.* By J. Jones of Gelly, Montgomeryshire.—On the 3d or 4th of April, I was applied to by a widow, accompanied by her daughter, an unmarried female, nineteen years of age, under the following circumstances:—The mother stated that her daughter's health had been gradually declining for some months past, that she was suspected to be pregnant, and that she, (the mother,) wished me to decide whether she was so or not. The girl, who was of a naturally robust constitution, presented the appearances of impaired health. She was considerably emaciated; her countenance was sallow; tongue furred and white; pulse 84, and extremely small. She said that she had frequent vomitings in the morning, anorexia, and constipated bowels. She attributed the commencement of her illness to her having been suddenly exposed to cold and wet during menstruation six months previous; the catamenia were suppressed, and had not since appeared. About three months after this period she first perceived her abdomen to be preternaturally enlarged, and this enlargement had progressively increased up to the time of her application to me. It was then of the ordinary size of that of a female in the seventh, or the latter part of the sixth month of pregnancy, and the uterus was distinctly felt to reach as high as the umbilicus. I applied the stethoscope to various parts of the abdomen, but no sound was discernible, having the slightest similarity to that of the placental or fœtal pulsations. The mammæ were flaccid, and the areolæ surrounding the nipples wanted that deep red colour which is so characteristic of pregnancy. A vaginal examination was positively refused; and under all the circumstances of the case, I felt incompetent to form any decisive conclusion, whether the girl was pregnant, or laboured under some uterine disease.

After the lapse of three days I was again visited by this young woman, when, to my astonishment, I found the abdomen was reduced to its natural dimensions; the uterus was no longer to be felt above the pubis, and her health, she said, was much improved, her general appearance, indeed, very clearly proving this to be the case. The account she gave was, that on going to bed the first night after she had applied to me, she suddenly, to use her own expression, felt something burst in her inside, and instantly a profuse quantity of extremely fetid gas issued *per vaginam*, mixed, however, with a few small clots of blood. The flatus, she said, must have continued to discharge for at least two minutes, when she felt faint, and subsequently became quite insensible. The mother corroborated the testimony of her daughter, and stated such to have been the fœtor of the gas expelled, that she found it impossible to remain in the same apartment with her daughter.

I much doubted the truth of this narration, and suspecting that abortion had taken place, I determined to prevail on the girl, if possible, to allow me to make a vaginal examination, and after a great deal of persuasion, succeeded, when I instantly found that the vagina was entirely closed by the hymen, with the exception of a small orifice, certainly not half an inch in circumference, through which the catamenia had escaped,—a strong proof that the girl had never indulged in illicit intercourse with the other sex, and coupled with the other circumstances of the case, that the testimony of her and her mother was faithfully true. The girl, after this occurrence, rapidly regained her former health. The catamenia have once since appeared, and she is now, in every respect, perfectly well.—*Lancet, May 31st*, 1834.

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49. *On the Impediments to Easy Delivery, from some Malformations of the Fœtus.*—It has been too generally admitted, that those monstrosities only which are characterized by an excess or redundancy of parts, or by extreme malposition of these, can afford any real impediment to the expulsion of the child. A few examples will prove that this affirmation is not quite correct; but it will be proper, before particularizing them, to make an illustrative remark or two.

1. If the limbs of the fœtus be so wasted away, or so imperfectly formed, that they look rather like stumps, or like turtle-flappers, than like the ordinary lengthened extremities, the fœtus is necessarily more moveable in the liquor amnii, and must, in consequence of this, be more liable to a mal-presentation.

If, in such a case as this we have supposed, we should wish to deliver the child by turning, our diagnosis of the parts which we fell may very probably be obscure and perplexing—add to which, there may be no convenient part to lay hold of. It was in an example of this kind, that Pen was obliged to apply the crotchet upon the sacrum, and Delamotte confesses that he was once exceedingly puzzled to distinguish the different parts of a monstrous fœtus.

2. In anencephalous monsters, whose spine is found open behind, the head is usually thrown backwards, and the occiput is actually concreted with the cervical vertebræ. Such a malformation must seriously impede delivery, (if the fœtus be moderately large,) as the whole body is thereby an unpliant mass. Fortunately, these monsters are seldom carried the full time; but, even at the eighth month, they very commonly cause a tedious and painful accouchement. It is frequently necessary to effect the delivery by turning.

There are many other deformities of the fœtus, which may be unfavourable to the naturally easy expulsion of the child; such are adherences of the limbs to each other, or to the body, or of the fœtus to the secundines, (an anomaly which is frequently associated with some malformations of the fœtus itself, as eventrations, &c. and which Geoffroy St. Hilaire considers to be, indeed, the cause of the malformations,) or, lastly, an abnormal agglutination, or torsion of the navel-string. The mere death of the fœtus has been very generally supposed to render a labour less easy; and indeed the ancients believed that the expulsion was effected chiefly by the efforts of the child itself. To a certain extent, we must confess, this idea is correct; for there can be little question but that the death of the fœtus, by disturbing or arresting the utero-placental circulation, must have the effect of impairing the contractility of the womb, and should putrefaction have commenced, so as to render the flesh soft, loose, and inelastic, the fœtus must act almost as a plug, filling up the passage, and merely, perhaps, protruded by the violent contractions of the expelling organ, without any power of accommodating itself to the different turnings. When the body is in this soft state, it does not well transmit the impulsion communicated by the uterus to the head, but often rather bends or folds upon itself, and thus presents an unfavourable part to the os uteri—a part which is very rarely protruded first in a living child. The analysis of obstetrical tables will be found to corroborate this statement. Out of 15,652 births, at the Hospice de la Maternité, 689 children were still-born—of these 689, 539 were in a putrid state, or in the proportion of 7 to 9. The following exhibits the mode of delivery in these cases:—

Born spontaneously	by the vertex	514
	hips	
	face	3
	shoulder	4
Delivered with the forceps	vertex	5
	forehead	1
Delivered by turning	vertex	7
	shoulder	3
Delivered after craniotomy		2
		539

According to this table, it appears that, in one case out of every eighteen in which the fœtus was putrid, recourse had to be made to the use of the hand, or of instruments, to effect the delivery; whereas, in the labours of living children, the proportion is a great deal lower—once in about 60 cases.

To illustrate the remarks on the occasional impediments to natural accouchement, from some malformations of the fœtus, we shall adduce an example or two.

Obs. 1. *Anencephalous Fœtus, born easily and naturally.*—A woman, 31 years of age, was admitted into the Maternity to be delivered of her fourth child. During her pregnancy, she had suffered much from cardialgia and anorexia; when admitted, the membranes had already broken and the waters freely discharged, but the labour-pains did not come on for a few hours afterwards. When the os uteri had dilated sufficiently, the presenting part of the fœtus could not be satisfactorily made out—it felt quite soft, and was at first supposed to be the genital organs, but the hips could not be traced; and, by continuing the examination, one of the arms was felt.

As the labour proceeded, the soft mass was protruded lower down, and in the middle of it, the accoucheur thought that he could feel a sort of opening, which received the extremity of the finger. The expulsion was gradually effected. On examination after delivery, it was discovered that the tumour was a large reddish fungosity which covered the entire base of the cranium, and occupied the place of the brain. The fœtus was malformed in other respects, for the anus was imperforated, and there were no traces of external genital organs; there were also only four toes on each foot.

Obs. 2. *Anencephalous Fœtus, presenting the Shoulder—Delivery by Turning.*—A middle-aged woman, pregnant of her second child, was seized with labour-pains in the eighth month. The pains had been preceded by hæmorrhage, and when the state of the parts was ascertained by "le toucher," it was found that the placenta adhered to the os uteri: higher up a hand could be felt, and, by following this, the forearm and arm might be traced; the fœtus was still alive, but very small—the delivery was effected by turning. The fœtus was monstrous, for the cranium was altogether destitute of its vault, and, in the place of the brain, nothing was to be seen but vesicular fungosities, full of serosity. It lived for a moment or two after its expulsion, but never breathed.

General Remarks.—It is important to observe that, independently of the more frequent malposition of a dead, than of a living fœtus, we have oftener the necessity of employing instruments in the one case than in the other; the foregoing table shows that this happens about once in 38 dead labours, even when the presentation is quite normal. If the data of other institutions agree with those furnished from the Maternité, the conclusion of the ancients, previously alluded to cannot be gainsayed; and, at all events, we must admit that a living fœtus is more favourable for easy expulsion than a dead one. But, in truth, the idea, although ridiculed by Petit, and by most subsequent accoucheurs, is not a whit more improbable than a favourite one of late years, we mean that which attributes the ordinary presentation of the head to an instinctive, and, in some degree, a voluntary effort or culbute of the fœtal being to direct its head foremost.

M. Paul Dubois read a very ingenious paper on this subject to the Royal Academy, (of which an abstract is given in a late No. under the head of the Proceedings of the Institute,) but his reasonings are often fallacious, and many of the data on which they are founded are not correct. The great frequency of malpresentations in cases of deformed fœtuses cannot surely be attributed to the feebleness of the instinctive and spontaneous effort of the fœtuses, but depends much more probably on their excessive mobility in the liquor of the amnion, monsters being very generally smaller, and occupying less space than healthy children. Whenever the fœtus floats about freely in the uterus at the time of labour, the chances of malpresentation are much increased; and as it is only in the latter months of natural pregnancy that the fœtus occupies nearly the whole of the cavity of the uterus, and as the head is at this period heavier, although by a very small excess of preponderance, than the rest of the body, the reason of the most common, and therefore the natural presentation is sufficiently obvious. We do not however mean to deny in toto, the occurrence of any instinctive movements of the fœtus in utero, for we believe that they do take place, and moreover that their frequency is in proportion to the inconvenience and constraint of the position in which the fœtus chances to be placed, but these movements must be blind, and obedient much more to the operation of mere gravity than to the choice or the will of the young being. Within this limit we consider its instinct to be comprehended, that it endeavours to resist any painful or disadvantageous position, say, for example, the presentation of the face, (a presentation which is much more frequent when the child is dead, than when it is alive; the proportion being as 5 to 97;) and simply because certain muscles are thereby forcibly and distressingly extended; in consequence of this the living being struggles against it.

But surely this admission does not warrant us in saying that the fœtus instinctively chooses the position most favourable to its birth; with as much propriety we may suppose that it voluntarily turns round the occiput, so as to bring it under the symphysis pubis, during the second act of parturition; all that we can fairly infer is that it strives against any position or attitude which is painful or irksome. The ingenious doctrine of M. Dubois would therefore be more correct if it simply enounced "that the child contributes by its automatic movements, to the gliding of the head towards the most depending part, which is the cervix of the womb."—*Med. Chirurg. Rev. from Rév. Méd.*

MEDICAL STATISTICS.

50. *Statistic Views of the Mortality in Various Countries in Europe.*—An article under this head in the *Edinburgh New Philosophical Journal*, for April 1834, conducted by Professor Jameson, exhibits an interesting view of the proportional mortality in the principal European states, the difference in which is very considerable. The computations profess to be founded upon official documents obtained in late years, and the following comprises a summary of the most interesting results, which will constitute a valuable addition to the stock of medical statistics with which the pages of the American Journal has been enriched.

The proportion of deaths to the population in the Roman territory and the ancient Venitian provinces, is 1 inhabitant in 28; in Italy generally, Greece, and Turkey, 1 in 30; in the Netherlands, France and Prussia, 1 in 39; in Switzerland, the Austrian empire, Portugal and Spain, 1 in 40; in European Russia and Poland, 1 in 44; in Germany, Denmark and Sweden, 1 in 45; in Norway, 1 in 48; in Iceland, 1 in 53; in England, 1 in 58; in Scotland and Ireland, 1 in 59.

It hence appears that the shortest duration of life does not correspond with the greatest rigour of climate. Norway, Scotland and Iceland, being much more favourable to the prolongation of life than the milder regions of southern Europe, where three deaths take place in the latter, scarcely two occur in the limits of ancient Scandinavia.

"Russia and Poland, where nature and fortune have not been lavish of the necessaries of life, enjoy however, an astonishing longevity. The population, comprising a mass of nearly sixty millions, spin out their existence almost one-half longer than that which is enjoyed by the inhabitants of Italy, and exactly twice the length of time which any one can expect to live in the capital of Austria."

"The smallest mortality in Europe occurs in maritime countries, which are in the vicinity of the polar circle, such as Sweden, Norway and Iceland. This is also the case in countries where, as in Russia, the influence of climate is not aided by civilization, and of itself is sufficient to assume long life to mankind."

"Countries where the heat is moderate, are not as might be supposed, among those which possess the advantage of a small mortality; to obtain it, they must require the benefits of a high state of social order."

"The southern countries, the mild climate of which seems to be so favourable to the human race, are, on the contrary, regions where life is exposed to the greatest dangers. In the smiling plains of Italy, the chances of dying are one-half greater than those of cold and foggy Scotland; and under the beautiful skies of Greece, the certainty of life is one-half less than among the ices of Iceland."

Estimates of the mortality in tropical regions made by Humboldt and others, shows the general pernicious influence exercised by the climate of the torrid zone, the extent of which is however different with the different races of inhabitants; thus for example in 1805, the deaths at Batavia were 1 in 11 of the Europeans; 1 in 13 Slaves; 1 in 29 Chinese; 1 in 46 Javanese. In Bombay in 1815, Europeans, 1 in 18¼; Mussulmen, 1 in 17½; Parsees, 1 in 24; Guadaloupe, 1816 to 1824, whites, 1 in 23½; Freedmen, 1 in 35; Martinique, 1815, whites, 1 in 24; Freedmen, 1 in 33; Grenada, 1811, slaves, 1 in 22; St. Lucia in 1802, slaves, 1 in 20.

One of the most interesting statistic views of the mortality in various countries, is that in which the influence of the progress of civilization is exhibited, by comparing the deaths to the population of the same country at intervals sufficiently long to admit of a decided social amelioration. The following exhibits this subject in a very striking manner.

The number of deaths compared with that of the population, was—

In Sweden - - -	1754 to 1763,	1 in 34;	in 1821 to 1825,	1 in 45
Denmark - - -	1751 to 1756,	1 in 32;	in 1819 - -	1 in 45
Germany - - -	1788 - -	1 in 32;	in 1825 - -	1 in 45
Prussia - - - -	1717 - -	1 in 30;	in 1821 to 1826,	1 in 39
Wurtemberg - -	1749 to 1754,	1 in 32;	in 1825 - -	1 in 45
Austria - - - -	1822 - -	1 in 40;	in 1828 to 1830,	1 in 43
Holland - - -	1800 - -	1 in 26;	in 1824 - -	1 in 40
England - - -	1690 - -	1 in 33;	in 1821 - -	1 in 58
Great Britain - -	1785 to 1789,	1 in 43;	in 1800 to 1804,	1 in 47
France - - -	1776 - -	1 in 25½;	in 1825 to 1827,	1 in 39½
Canton of Vaud -	1756 to 1766,	1 in 35;	in 1824 - -	1 in 47
Lombardy - - -	1759 to 1774,	1 in 27½;	in 1827 to 1828,	1 in 31
Roman States -	1767 - -	1 in 24;	in 1829 - -	1 in 28
Scotland - - -	1801 - -	1 in 44;	in 1821 - -	1 in 59

From all which it appears that the mortality has diminished.

In Sweden, nearly ⅓d in 61 years; in Denmark, 2-5ths in 66 years; in Germany, 2-5ths in 37 years; in Prussia, 1-3d in 106 years; in Wurtemberg, 2-5ths in 73 years; in Austria, 1-13th in 7 years; in Holland, ½ in 24 years; in England, 4-5ths in 131 years; in Great Britain, 1-11ths in 16 years, in France, ½ in 50 years, in Canton of Vaud, ⅓d in 64 years; in Lombardy, 1-7th in 56 years; Roman States, ⅓d in 62 years.

The principal towns in Europe present the same gradual diminution, as will be evident from the following proportions estimated for different epochs, viz.

Paris - - - - - -	in 1650, 1 in 25	inhabitants;	in 1829, 1 in 32
London - - - - - -	1690, 1 in 24	do.	in 1828, 1 in 55
Berlin - - - - - -	1765, 1 in 28	do.	in 1827, 1 in 34
Geneva - - - - -	1560, 1 in 18	do.	in 1821, 1 in 43
Vienna - - - - - -	1750, 1 in 20	do.	in 1829, 1 in 25
Rome - - -	in 1762 to 1771, 1 in 21	do.	in 1828, 1 in 31
Amsterdam -	1761 to 1770, 1 in 25	do.	in 1828, 1 in 29
Cambridge - - - -	in 1811, 1 in 41	do.	in 1821, 1 in 58
Norfolk - - - - -	1811, 1 in 50	do.	in 1821, 1 in 59
Manchester - - - -	1757, 1 in 25	do.	in 1821, 1 in 58
Birmingham - - - -	1811, 1 in 30½	do.	in 1821, 1 in 43
Liverpool - - - -	1773, 1 in 27	do.	in 1821, 1 in 41
Portsmouth - - - -	1800, 1 in 28	do.	in 1811, 1 in 38
Petersburg - - - -	1768, 1 in 28	do.	in 1828, 1 in 48
Stockholm -	in 1758 to 1763, 1 in 19	do.	in 1827, 1 in 26

The causes enumerated, as tending to an increase of mortality, are chiefly—

The marshy humidity of the air, especially in hot countries; the effects of privations on the lower classes of society; the scarcity of the means of subsistence, or, at least, their rise in price as compared with the wages of labour; pestilential diseases; unfavourable seasons, especially abrupt changes in the temperature; the closeness, dirtiness, and unhealthiness of private houses, prisons, infirmaries, and hospitals; the excessive use of spirituous liquors, and indulgence in drunkenness; unwholesome or unremitting labour, especially in childhood and youth; lastly, war, *but less in consequence of battles than forced marches,* and frequently the mal-administration of armies.

The chief causes which in connexion with the progress of civilization have tended to diminish mortality, are—the draining of marshes, and the embanking of streams and rivers; the favourable division of public wealth, which affords to each individual labour and subsistence; the abundance and good quality of the food of the people; the attention bestowed on children from birth, and continued in schools, manufactories, and public establishments; vaccination and sanitary arrangements, which prevent the importation or development of contagious diseases; the low price of the productions of industry, allowing the less affluent classes to enjoy those habits of cleanliness which were equally unknown and beyond their reach, and furnishing them with the means of escaping the intemperateness of the season; lastly, the successful measures adopted for diminishing the insalubrity of towns, and especially colleges, theatres, hospitals, prisons, churches, and other public establishments, which, in many places, are still without the means of ventilation, heating and cleaning.

The editor concludes his interesting observations upon the results of the social ameliorations which have been gradually introduced into European countries during the last century by the following striking conclusions. "If we collect England, Germany, and France in one group, we find, that the average term of mortality which, in that great and populous region, was formerly 1 in 30 people annually, is not at present, more than 1 in 38. This difference reduces the number of deaths throughout these countries from 1,900,000, to less than 1,200,000 persons; and 700,000 lives, or 1 in 83 annually, owe their preservation to the social ameliorations effected in the three countries of Western Europe, whose efforts to obtain this object have been attended with the greatest success."

"The life of man is thus not only embellished in its course by the advancement of civilization, but is even extended by it, and rendered less doubtful. The effects of the amelioration of the social condition are to restrain and diminish in proportion to the population, the annual number of births, and in a still greater degree that of deaths; on the contrary, a great number of births, equalled or even exceeded by that of deaths, is a characteristic sign of state of barbarism. In the former case, as man in a mass reach the plenitude of their physical and social development, the population is strong, intelligent and manly; whilst it remains in perpetual infancy where generations are swept off without being able to profit by the past, to bring social economy to perfection."

51. *Statistics of Lithotomy at the Hospital of Incurables, at Naples, for thirteen years.* By Salvatore de Renzi, M. D.

	OPERATED ON.				AGE.		
Years.	Men.	Women.	Cured.	Died.	Infancy.	Manhood.	Old Age.
1821	27	0	23	4	12	11	4
1822	28	0	26	2	12	12	4
1823	38	1	31	3	14	15	5
1824	35	2	32	5	15	16	6
1825	38	0	26	4	14	15	1
1826	35	2	32	5	17	17	2
1827	18	1	12	7	7	9	3
1828	25	0	19	6	10	14	1
1829	35	1	31	5	16	18	2
1830	32	3	29	6	15	17	3
1831	31	1	39	2	17	12	3
1832	22	0	17	5	14	6	2
1833	38	1	33	6	23	10	6
Totals.	389	12	341	60	185	174	42

The whole number operated on is thus 401, of whom 60 died, 14 96-100 per cent. or 1 in 7 nearly. In this number, there are comprised two operated on by the method of Scarpa; all the others were operated on by the lateral method modified.

The period during which the patients had laboured under stone, varied from three months to sixteen years. The time of cure was from six days to a month. In 1827, an epidemic verminous fever broke out, which destroyed more than a third of those operated on.

In the bodies of the dead, traces of anterior diseases of the kidneys, bladder, or intestines, were almost always found.

The above table relates to those operated on in the hospital, who are all poor, badly nourished, and badly nursed. The rich are operated on at their own homes.

Every surgeon has a right to operate at the hospital, except one who has been prohibited on account of his proved unskilfulness. It is on that account that the mortality rises to 1 in 7, for skilful surgeons lose only 1 in 20, and M. Petrunti has lost only 1 in 25.—*Gaz. Med. Feb.* 1834.

CHEMISTRY.

52. *New Alkaloids.—Sarsaparilline.* "This substance (says M. Thubeuf) is regarded as the active principle of sarsaparilla. Like the original root, it communicates to water the property of frothing when agitated, and gives it that sharp, bitter taste which we find in the aqueous or alcoholic infusions of sarsaparilla. When examined by the microscope, it presents radiated crystals, the layers of

which converge toward their extremities, and it has no action whatever upon turnsole paper. Sarsaparilline, when pure, is white, without odour, and, if it contain no water, is tasteless. It is little soluble in cold water, but the whole is taken up by boiling water, which throws it down again as it grows cold. It is soluble in alcohol, either cold or warm, and the substance may be crystallized in this manner by evaporation. It may be precipitated from its alcoholic solutions by the addition of a little cold water. This alkaloid is insoluble in ether, even at the boiling point, but is very easily dissolved in a warm mixture of alcohol and ether in equal quantities.

"*Atrophine.*—This substance, (says MM. Geiger and Hesse,) already noticed by Brande, has been obtained from the Atropa belladonna. It has presented identical properties when obtained from the same part of the plant by different processes. It is white, and crystallizable into bright, transparent prisms, which have a tendency to group together; at the ordinary temperature, water takes up only a hundreth part of the mass. The aqueous solution of atrophine renders turnsole paper blue, when reddened by an acid. It acts on the organ of vision in the same way as belladonna, and even a very weak solution is sufficient to dilate the pupil, which remains in that state for a considerable time. Chlorine has very little action upon it, and it seems to form sub-saline compounds with the acids. The aqueous infusion of atrophine forms an abundant white precipitate with the aqueous infusion of galls, and it forms an orange-yellow precipitate with the hydrochlorate of gold.

"*Hyosciamine.*—This alkaloid is most easily obtained from the seeds of the Hyosciamus niger. It crystallizes into transparent, colourless needles. Its taste is acrid and disagreeable, like that of tobacco, and it has a powerfully poisonous action. The smallest quantity, placed on the eye, produces permanent dilatation of the pupil; in an anhydrous state it is not alkaline, but becomes so by the addition of a small quantity of water. The salts of hyosciamine are neuter, they are partially crystallizable, and are as poisonous as the plant itself.

"*Daturine.*—This alkaloid has been extracted by the same chemist from the Datura stramonium. It readily crystallizes into regular prisms, which are colourless and brilliant. It is inodorous. The taste is at first slightly bitter, and then becomes very acrid like that of tobacco. Daturine is a highly poisonous substance; one-eighth of a grain was enough to poison a sparrow in three hours. When placed on the eye, it occasions a strong and permanent dilatation of the pupil.

"*Solanine.*—This substance, already discovered by several French chemists in the Solanum nigrum, Solanum dulcamara, and the Solanum mammosum, has been recently found in the potato by M. Otto of Brunswick. He obtained the alkaloid in the following manner:—The potato buds were first treated in water, acidified by sulphuric acid; he then separated the sulphuric and phosphoric acids, with the extractive matter, by acetate of lead; the colourless liquor which remained was saturated with lime water, and the precipitate boiled in alcohol; and the product thus obtained was purified by frequent washing in alcohol. In order to determine its action on the animal economy, M. Otto tried the effects of this substance upon rabbits, and found that it should be ranged amongst the acrid narcotic poisons. One grain of solanine was sufficient to kill a rabbit in six hours; a second rabbit, which was much stronger than the former, was destroyed in nine hours after having taken three grains. It exercises a remarkable paralyzing effect on the hinder extremity of the animal before occasioning death, and this paralysis may be produced in horned cattle, by simply feeding them on the washings of potato-tops. This substance is white and powdery, and turns blue turnsole paper which has been reddened by the action of an acid. The greater part of its salts assumes an aspect like gum upon desiccation.

"*Colchicine.*—This alkaloid crystallizes into delicate needles; its flavour is very bitter; when placed in the nares it does not excite sneezing, while the smallest portion of veratrine occasions a violent fit. Colchicine is a strong poison; one-tenth of a grain dissolved in alcohol was given to a cat six weeks old; the animal began at once to foam at the mouth; after the lapse of an hour she passed abundant alvine evacuations, and vomited; she soon became feeble, unable to walk steady, fell down on the ground, rolled about, and was agitated by convulsive motions; these symptoms increased in severity; the animal died in twelve hours. On examining the body after death, the intestinal canal was found to be violently inflamed, and blood was effused into its tissue through the whole extent; one-twentieth of a grain of veratrine was given to a younger cat, in order to judge of its effects by comparison; they were very inergetic; the animal quickly became feeble, was seized with convulsions, fell on the ground, and died within ten minutes. After death nothing remarkable was discovered except inflammation at the upper part of the œsophagus. This portion of the canal was not inflamed in the cat poisoned by colchicine.

"*Aconitine.*—M. Geiger has found this alkaloid in the leaves of the aconitum napellus; it does not seem susceptible of crystallization. When perfectly pure, it is white, grained, and forms a colourless, transparent mass. Its taste is bitter, then acrid, but the acridity is not strong or permanent. In this respect it differs from the plant, whose taste often remains twelve hours, leaving the tongue quite benumbed. The acrid principle is united with the aconitine, from which it may be separated by repeatedly combining the alkaloid with acids. When this substance is completely deprived of the acrid principle, it is excessively poisonous; the one-fiftieth part of a grain, dissolved in alcohol, was sufficient to kill a sparrow in a few minutes, and one-tenth of a grain destroys a small bird with the rapidity of lightning. When placed on the eye it produced dilatation of the pupil, but the effect is of short duration."—*Journal de Pharmacie, February and March,* 1834.

53. *New Researches on the Composition of the Serum of the Human Blood.* By F. Boudet.—The object of these researches is to determine the nature of the relation between the globules of the blood and the colouring matter and the serum, and to ascertain the chemical constitution of the latter fluid. M. Boudet takes a general view of all the representations which have been given of the nature of the globules, from the time of Leeuwenhoeck to that of Hewson, Home, Prevost and Dumas, Young, and lastly, Raspail, Donné and Muller. It is well known that Hewson represented the globules as flat orbicular or circular bodies, like coins, but with prominent centres, and that the observations of Prevost and Dumas are in favour of the same idea. Home, on the other hand, inferred, from what he conceived careful microscopic observation, that they were minute spherical bodies, consisting of a central globule, enveloped in colouring matter during life. This idea was also maintained by Young, who considered the central *umbilicus* or prominence as an optical illusion.

The general tendency, in short, of different observations on the constitution of these minute and problematical bodies appears to be, that they consist of two concentric spheroids. The separate and essential existence of the inner spheroid appears to be established, especially by the experimental observations of MM. Prevost and Dumas, and M. Donné and M. Muller. Thus the first inquirer found, that, if dried blood was diluted in a saline solution, the central globules were easily recognised; and that, conversely, when the blood was diluted with pure water, the colouring matter was dissolved, or rather divided in this fluid, and the internal spheres appeared then to be colourless. Donné found, among numerous microscopical observations, that whether he operated on human blood, or that of the frog, the globules were effaced, indeed, when diluted with water on a glass plate; but that, if he waited till the colouring matter had spread over the margins of the plate, he then observed these globules colourless and transparent floating in the fluid, and that it is absolutely impossible to dissolve them in a large quantity of water within a space of more than twenty-four hours. M. Donné, in short, regards the globules as minute bodies of a lenticular shape, formed of a fundamental tissue of fibrine, in the interstices of which albumen and colouring matter are deposited.

Lastly, in a letter recently addressed to the Institute, and inserted in the *Annales des Sciences Naturelles*, (*October*, 1832, p. 222,) M. Muller adds the following confirmatory statements, derived from the blood of frogs. "The globules of blood are composed of a colourless *nucleus* and red crust, which undergoes gradual solution in pure water, but not in salt or sugared water. After the solution of the red crust in water, the central *nuclei* remain insoluble in simple water, but are dissolved in alkaline water. The most effectual mode of detaching these *nuclei* from their red capsules, is to mix a drop of acetic acid with a drop of blood from a frog, or any other animal, and to observe the effect microscopically. The red crust is instantly dissolved in the acetic acid, while the elliptical *nuclei* remain, and may be examined in their proper form."

From all these testimonies, combined with his own observation, M. Boudet infers, that, whatever discordance prevails on other points, it is certain that the globules of the blood consist of two substances—a colourless and a red colouring matter, and that in configuration they form two concentric spheroids. To us it appears from the facts more natural to represent them as consisting of a central spheroid, and an inclosing spheroidal capsule—both concentric.

On the diameter and size of these globules, M. Boudet merely repeats the inference formerly established by several observers, that though these diameters vary in different species, and much more in different animals, they are invariably the same in the same animal. This might demonstrate the impropriety of transfusing the blood of an animal of one species into the vessels of an animal of a different species. The odorous principle of the blood, he is of opinion, depends on the presence of some volatile acid substance, analogous to those which were found by Chevreul in adipose substances. This opinion derives some probability from the fact, that M. Matteucci, in distilling the serum of goat's blood with sulphuric acid, obtained a mixture of lactic and caproic acid.

On the important question, as to the state in which the fibrin exists in blood, M. Boudet rejects as untenable, the common opinion, that this principle forms part of the globules, partly in consequence of the experiments of M. Le Canu on the colouring matter of the blood, and partly by reason of the experiments of M. Muller, which are entirely at variance with such a supposition.

This observer maintains that the fibrin in the coagulable part of the blood is not contained in the globules, but is dissolved in the serum. To demonstrate this inference he selects the blood of recent frogs, the globules of which are too large to pass through the pores of filters. Having amputated the thigh of a frog, he causes the blood to fall on a moistened filter, and mixes with it an equal quantity of pure water, or rather of sugared water. There escapes a clear liquid, in which is quickly formed a clot of fibrin, which is speedily condensed and becomes white. The globules in the meantime remain on the filter, unchanged and undissolved if sugared water have been mixed with the blood. From this experiment it results, that the coagulation of the blood is not justly explained by referring it to aggregation of the globules. This experiment succeeds in summer, spring, or autumn, but not in winter, because the blood of frogs does not coagulate at this season.

These experiments, M. Boudet infers, concur in showing that the fibrin exists in the *serum* in a state of solution.

M. Boudet has further detected in the blood, at least, its *serum*, the presence of three principles,—two entirely new, which had hitherto escaped analytical examination; and he is led to express the opinion that, as it was only by operating on very large quantities that he discovered the principles alluded to, it is necessary to have recourse to a new mode of analysis, as the circulation and repair of the blood are so rapid that any given quantity taken at any particular point of time may contain mere traces of the substances found to exist. He further thinks, that, if examined in this manner, the blood must contain not only the materials of all the organs, but even the characteristic principles of the different secretions, as cholesterine, urea, &c.

The substances next found in the human blood by M. Boudet are,—1, an alkaline soap; 2, cholesterine; and 3, a fat substance hitherto unknown, and to which he applies the distinctive name of *seroline.*

These substances were obtained in the following manner.

A large quantity of *serum*, formed by the combination of three blood-lettings, being dried by a gentle heat, washed by boiling water, and dried again, was reduced to powder, and treated with boiling alcohol. The alcoholic liquors which had been colourless, became turbid on cooling, and from them were precipitated very slowly white *flocculi*, separable by the filter. These flocculi, which presented the aspect of little adipose pearly plates, slightly translucent, but without crystalline form, were the new principle denominated *seroline.*

Viewed by the microscope, these adipose whitish pearly plates seem to be formed of filaments, swelling at intervals with minute white opaque globules, which give them the aspect of chaplets or strings of beads.

Seroline melts at + 36° = 97° F. evinces no reäction on reäcting papers, and reddens, like cholesterine, in contact with concentrated sulphuric acid.

It does not form an emulsion with cold water, and if warmed it swims on the surface of the fluid in the form of a colourless oil.

It is readily dissolved by sulphuric ether even in the cold. It is in no degree affected, on the contrary by alcohol in the cold, and traces only are dissolved in that fluid at 36° = 92° F. and at ebullition.

Subjected to warm *aqua potassæ* for six hours, it undergoes no change, and hydrochloric acid causes no precipitate in such alkaline liquor.

Long heated with nitric acid it is not dissolved, but becomes soluble in *aqua potassæ*, which then acquires a brown colour.

Distilled at the lamp in a glass tube, it emits a very characteristic odour, furnishes alkaline vapours, is partly volatilized, and leaves a carbonaceous residue.

The alkaline soap and cholesterine were obtained in the following manner.

The filtered liquor distilled in the sand-bath, and reduced to one-fourth of its volume, exhibits, upon cooling again, a milky turbidity, yet without remarkable precipitate.

The evaporation being continued, furnishes a residue of a yellowish-brown aspect, of the consistence of turpentine, forming with cold water an emulsion of a bitter taste, and a smell analogous to that of the phosphorated fat of the brain.

This residue triturated cold with alcohol at 36° = 97° F. gave it a yellow colour, and became attached to the tube in the manner of a soft resin. The alcohol was renewed till it ceased to acquire colour, and the mixture was then separated into two distinct products; one soluble in alcohol, corresponding to the only matter of M. Le Canu, the other insoluble in the fatty matter of the brain.

From the first of these left to itself were precipitated, at the end of a certain period, minute crystalline plates, of an appearance analogous to that of cholesterine, and which, indeed, present no material difference of character from that substance.

When the serum after this precipitation was decanted and evaporated to dryness, it furnished a viscid residue of a bitter taste, very soluble in alcohol, and retained some cerebral fat, which was afterwards detached as far as possible by the aid of alcohol, at 22°= 72° F., which appeared to M. Boudet to exercise no sensible influence on the substance. Lastly, he dissolved it in ether, which separated from it some traces of saline matters.

Thus purified, this new product was soft, sensibly transparent, of a bitter saponaceous taste, a little altered by the taste of the phosphorated fat, very soluble in alcohol and ether, sensibly soluble in water, cold or hot, and rendering it mucilaginous, like a genuine soap, and speedily restoring the blue colour to turnsol, reddened by acid. From these characters M. Boudet felt it impossible to mistake this substance for an oily matter, and most probably in the shape of a genuine soap. He afterwards confirmed this inference by the addition of hydrochloric acid to the watery emulsion upon which drops of oil came to the surface. He regards the soap as a probable mixture of oleic and margaric acids.

M. Boudet regards the oily matter of M. Le Canu as partly alkaline soap, partly *seroline* and cholesterine.—*Journal de Pharmacie, June,* 1833, *and Edinburgh Med. and Surg. Journ. April,* 1834.

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54. *Composition of Serum—Serolin.*—M. Boudet remarks, that except the saline constituents of the serum of human blood, and the extractive matters, imperfectly known by the names of ozmazome, impure lactate of soda, muco-extractive matter, &c. the only well defined substances shown by analysis to exist in the serum are albumen, the fatty matter of the brain, urea, and an oily matter.

M. Boudet did not examine the extractive matters dissolved by water from dried serum, but only those products which were obtained from dried serum by boiling alcohol, after the water had dissolved such as were soluble in it.

Having obtained a considerable quantity of serum, dried it, and dissolved all that was soluble in boiling water, it was again dried, and treated with boiling alcohol: the mixed alcoholic solutions were colourless. The mixture became turbid by cooling, and deposited, though very slowly, white flocks, which were separated by the filter; these had a fatty pearly lustre: they were not crystalline, but small and slightly translucid plates. In M. Boudet's opinion these plates constitute one of the principles of serum, and he calls it *serolin.* This substance, when examined by the microscope, appeared to be formed of small filaments, with small, white, opake globules, which gave them the appearance of strings of beads; it fuses at about 134° Fahr.; does not act upon test papers, but, on the contrary, like cholesterine, it reddens concentrated sulphuric acid. It does not make an emulsion with cold water; and if it be heated, it floats like a colourless oil on its surface. Sulphuric æther dissolves it easily, even when cold; on the contrary, alcohol of 0.837 dissolves a trace of it when boiling, and none when cold. Heated for six hours in a solution of potash it suffered no change, and muriatic acid added to the liquor produced no turbidness.

Neither muriatic nor acetic acid, whether cold or hot, produced any change in this substance: when long heated with nitric acid it was not dissolved, but became soluble in a solution of potash and rendered it brown.

Distilled by the lamp in a small glass tube, it emitted a very characteristic odour, gave alkaline vapours and a light coaly residue; part of it seemed to volatilize. The small quantity obtained did not allow of performing more experiments; but the above, M. Boudet thinks sufficient to establish serolin as a new immediate principle, and to justify the name which he has given it.

The alcohol from which the serolin had been separated by the filter was distilled in a salt-water bath, and when reduced to one-fourth of its bulk, the distillation was stopped and the liquor allowed to cool. It soon became turbid, but no material deposit was formed.

By continuing the evaporation in a capsule, a slightly yellowish brown residue was obtained: it was of the consistence of turpentine, and formed an emulsion with cold water. Its taste was acrid, and its smell similar to that of the phosphorized fatty matter of the brain.

This residue triturated with alcohol of sp. gr. 0.837, rendered it yellow, and attached itself to a tube like a soft resin. Fresh alcohol was added until it ceased to acquire colour, and two products were thus separated; one, soluble in alcohol, was of course the oily matter already alluded to, and the other was the fatty matter of the brain; this was insoluble in cold alcohol, but dissolved by it when boiling, and in æther, except a very small portion of a rosy matter, which was too minute for examination. It crystallized in brilliant laminæ, did not act upon coloured test papers, was unalterable by alkalies, made an emulsion with cold water; and its properties were perfectly similar to the cerebral fat, as described by Vauquelin and Chevreul.

The alcoholic solution, exposed for some time to spontaneous evaporation, gave small crystalline plates resembling cholesterine in appearance. On comparing their properties, it was found that they agreed nearly in their fusing point at about 278° of Fahr.; but they differed in this respect, viz. that pure cholesterine is crystalline, while this substance was in flocks, and had no crystalline splendour: this difference, however, appeared to depend upon its retaining a little phosphorized fatty matter, the odour of which it retained; and on mixing pure cholesterine with this substance, the mixture had the same properties as the supposed cholesterine of the blood. M. Boudet admits, however, that further experiments are required to ascertain positively that the serum of the blood contains cholesterine.

After the separation of this supposed crystallized cholesterine, the alcoholic solution was evaporated to dryness: it furnished a viscid residue, of an acrid taste, and soluble in alcohol. It still, however, retained cerebral fatty matter, which was separated as much as possible by alcohol, of sp. gr. 0.915, this appearing to have scarcely any action upon it: lastly, it was dissolved in æther, which separated from it traces of saline matter.

Thus purified, this new product was soft, somewhat transparent, of an acrid and soapy taste, slightly altered by phosphorized fatty matter, very soluble in alcohol and æther, and sensibly dissolved in water either cold or hot, and rendered it frothy like a true soap. Lastly, it restored the blue colour of litmus reddened by an acid; it appeared therefore to be a true soap. To decide this question, it was dissolved in hot water, and a few drops of muriatic acid were poured into the solution: abundant flakes were separated from a transparent liquid, and melted at the surface with the appearance of an oil. This oil after washing with hot water, retained no muriatic acid, reddened moistened litmus paper strongly, made no emulsion with water, and dissolved rapidly in alcohol and æther, rendering them acid: it immediately combined with soda, and reproduced a solution resembling common soap: it was probably a mixture of oleic and margaric acid.

M. Boudet remarks, that numerous attempts have been made to discover bile in the blood, and he further states that the existence above described of an alkaline soap, and probably of cholesterine, show that bile, or the various substances of which it is composed, are actually found in the blood.—*The London and Edinburgh Philosophical Magazine, &c. February,* 1834, *et Ann. de Chim. et de Phys. tom. lii. p.* 337.

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55. *Presence of Azote in all Seeds.*—It was known that some seeds contained azote; wheat is a striking example of this, since it furnishes gluten, a substance containing a large proportion of azote; but no one has hitherto announced that all seeds contain an animalized matter.

M. Gay-Lussac, has subjected a great number of seeds both in their natural state and deprived of their husk, to dry distillation and he has not found any which does not yield ammonia, either immediately or on the addition of some lime.

Many seeds, as rice, yield on distillation very acid products, whilst beans and most of the leguminous seeds furnish very ammoniacal products; but on adding lime to the former, the presence of ammonia is readily demonstrated.

From this M. Gay-Lussac concludes that in general, a grain without its envelope, may be considered as formed of two parts, one vegetable, which yields an acid product; the other animal yielding an ammoniacal product. Thus the acid or alkaline character of the product depends upon the predominance of one of these two matters over the other.—*Annales de Chimie, May,* 1833.

AMERICAN INTELLIGENCE.

Medical Education in Georgia. [Extract of a Letter from PAUL F. EVE, M. D. Professor of Surgery in the Georgia Medical College, to the Editor.]—With respect to the state of our profession in Georgia of which you requested me to inform you, I will observe that we hope a favourable change is about to be exercised by our medical college in this place. Six years ago a medical institution was attempted here under the appellation of a Medical Academy, by Dr. Antony, now our professor of midwifery. This not succeeding, or at least not being encouraged by a reciprocity of favours from the medical institutions of our country, the charter was extended by the legislature of 1829–30, to the power of granting diplomas under the same requisitions as other medical colleges. As a college, the first course of lectures was delivered by the six professors in the winter of 1832–3. Our class consisted then of twenty-eight or twenty-nine students. Four alone of that number were candidates, and the degree of M. D. was conferred upon them by our president last April. At the request of our friends, the application, (on account of the excitement in politics,) for pecuniary aid to the legislature, was withdrawn for this year. Our second session opened with a class of thirty-five—one of whom was virtually expelled the college during the course of lectures for immoral conduct; eighteen were expected to become candidates for the degree; seventeen however, only handed in theses. Of this number fifteen passed a satisfactory examination.

Our last legislature liberally endowed us with $ 10,000 cash, and land to the value of about $ 5,000 more. We have $ 5,000 from the city council for our services to the city hospital for ten years—and a lot has been given us on which our building is now being erected. Besides this, the faculty have raised $ 6,000, and have despatched it with an agent, Professor Dugas, to Europe, for apparatuses, &c. &c.: and another professor expects to leave here during the summer for the north to increase our chemical apparatus, and to attend to the interior arrangements of our building. The plan we have adopted is Grecian doric, seventy by seventy-six feet; six fluted columns, portico, dome and stucco-work. Two lecture rooms on first floor with laboratory and library; one above, with museum, dissecting room, &c. The contract is for the sum of $ 14,650; to be in readiness for the reception of the class in October next, and completed by 1st of next March.

Besides this medical college, we have a board of physicians which assembles annually at the seat of government in Milledgeville, whose duty it is to examine candidates for licences to practice medicine and surgery in the state. This body has the power to examine a candidate even with a diploma. It is thought, however, our penal code is deficient on this point; we have still quacks among us, but comparatively few. An application from the *Thomsonians* last winter was ridiculed in our legislature, and I believe the publication with respect to the licence to practice in the state, induced the well-known impostor Whitlaw, to leave our city quite suddenly.

As the graduates of our first commencement were not furnished to you, and were not published, I will first give you a list of them for the Journal, and if you can find room for them in the next number, you will very much oblige us and your humble friend.

At the first commencement of the Medical College of Georgia, held the 17th of April, 1833, in Augusta, the following gentlemen having complied with the requisitions of the institution received their diplomas.

Edward A. Eve, of Georgia, on Dyspepsia.
T. W. Grimes, of Georgia, on Dysentery.
Isaac Bowen, of Georgia, on the Blood, *in Greek*.
J. M'D. Borders, of Georgia, on Asthma.

At the commencement held in the Baptist Chapel on April the 16th, 1834, in Augusta, the following gentlemen received the degree of doctor of medicine.

A. W. Jones, of Georgia, on Revulsives.
M. W. Peters, of Georgia, on Bilious Fever.
B. D. Brewster, of Georgia, on Gastritis.
William Gilbert, of South Carolina, on Pleurisy.
D. Day, of Georgia, on Scarlatina.
J. C. Cobb, of New York, on Injuries of the Head.
Y. B. Olive, of Georgia, on Dropsy.
Jon. Toole, of South Carolina, on Remittent Fever.
James M'Lester, of Georgia, on Indigestion.
S. H. Brewster, of Georgia, on Goitre.
J. W. Earle, of South Carolina, on Typhus Fever.
Horace Neison, of Ireland, on Medicinal Effects of Cold.
E. W. Richardson, of Georgia, on Syphilis.
A. B. Greene, of Georgia, on Asiatic Cholera.
Paul H. Earle, of South Carolina, on Hydrocyanic Acid.

Dr. Brewster proposes pressure for the cure of goitre; by means of two springs coming from back of neck with pads so as to operate laterally upon the tumour, and lift it as it were from the trachea.

Dr. Paul H. Earle's experiments with the prussic acid have led him to fear bad effects from a dose of seven drops, prepared after the method of Scheele; he has himself taken that quantity, but laboured under unpleasant symptoms for some time.

Augusta, April 17th, 1834.

Case of Spinal Irritation.—The following case possesses peculiar value, from the relator, Dr. Andrew Nichols, of Massachusetts, being himself the subject of it. "To the correctness of Teale's essay," remarks Dr. N. "so far as it describes my own case, I can bear the most decided testimony. Several of the symptoms are common to this and other very different diseases; but, whenever we meet with any of these symptoms, the spine should be carefully examined, and, if a tender spot or spots be found, this tenderness must be cured before we can remove the complaint. If the disease should prove complicated, then, indeed, even removing this tenderness may not cure, although it will probably greatly alleviate the suffering and pain. In regard to the means of doing this—leeching, cupping, and blistering—recommended by Teale, I can also speak decidedly in favour of their efficacy. At a time when both my arms were so lame and painful that I could use them only with the greatest difficulty, four leeches, applied to the lower vertebræ of the neck—even before they dropped off—removed this lameness almost entirely. Like effects followed cupping and blistering. But the irritation would soon return, and acquire a repetition of the remedies. In this way the complaint was kept in check, but little, if any, progress was made towards recovery. Teale does not tell us the cause of this, which I soon found to be the following of one of his own directions—the confining myself most of the time to a horizontal position!—the real cause of the sudden return of the irritation, being continued *pressure* on the spine. The sufferer from this disease cannot lie long on his side, because the nerves of the arms, sides, hips, or lower extremities—the seat of the neuralgia—cannot bear pressure, but are made immediately painful by it. Hence the patient *involuntarily* turns on his back—pressure is consequently made on the seat of the disease; but, as this part is seldom the seat of much pain, the mischief is not readily discovered. He perhaps, if worn out with watching, sleeps. The spine is no longer relieved by the little motion he gives himself while awake. The pressure is continued perhaps an hour or two; and he awakes with all his neuralgic affections aggravated in a tenfold degree. It is only by the greatest effort that he can change his position. His back is still the easiest part; but there is acute pain, numbness, soreness, and all the protean forms of neuralgia, throughout the course of the nerves, which proceed from those tender parts of the spine, suffering from pressure. Having satisfied myself of these facts, it became my study to protect the spine from pressure. By the careful adjustment of featherbeds and pillows, while awake and on my guard, a tolerably easy position could be obtained and preserved for a short time. But sleep would invariably disturb this comparatively easy position, permit pressure on the tender parts, and restore the irritation and all its consequent mischiefs. I was therefore compelled to consider the direction in the books, for confining the patient to horizontal position, erroneous. I now sought relief by sitting up as much as possible. Such became my dread of the bed, from the increased uneasiness which invariably met me there, that for several days I sat up eighteen out of the twenty-four hours. Œdema of the lower limbs came on, for the relief of which recourse was had to bandages. In this way, by continuing the blisters and leeching, I slowly gained on the complaint. In the mean time, I had turned my attention to Dr. Arnott's hydrostatic bed—believing this, if, in reality, all that the journals describe it to be, the all-important means of curing this complaint in the most expeditious manner. I accordingly put in motion a train of operations, which, on the 27th ult. put me in possession of one in complete order. It proved all that I had anticipated. At nine o'clock, P. M. I threw myself upon it, and laid more at my ease than I had been in any position since my confinement, for nearly twelve hours—having had during that period nearly six hours of quiet sleep, without any increase of neuralgia. From that hour I have found myself constantly and regularly improving. Leeches or blisters have not since been used. The whole extent of the spine has been well rubbed twice a day with the following liniment:—℞. Tr. opii, Ol. oliv., Ol. terebinth.—equal parts.

"The lameness of my limbs is nearly removed. The urine, which, up to March 1st, had been during my confinement high-coloured, depositing a thick sediment, resembling brick-dust, and which stained the white earthen vessel in which it stood a short time, of a bright crimson colour, is now clear, and no longer deposites any sediment. I have indulged my appetite with a tolerably generous diet. Food digests well, which, by the way, has been the case throughout—having always relished food, excepting occasional periods of nausea from medicine. The antiphlogistic regimen was, however, rigidly adhered to until after the hydrostatic bed was obtained.

"I am now convalescent, gaining strength hourly. In reviewing the history of my case, I am inclined to attribute the commencement of spinal irritation to a sudden injury of the back, by jumping down from a block about two feet high, upon the ground. A sudden pain seized me in the back, which remained considerably lame for several days.* From this time some trifling soreness about the sacrum, lameness of the hips and shoulders, was felt daily. This, however, was but little noticed. During the last week in January, and the first week in February, these symptoms were gradually aggravated, and attendance on my various professional and other duties, became irksome, and I felt myself compelled to give them up. I now used liniments to the limbs, took purgatives, colchicum, and other medicines, for *rheumatism*—lounged on sofa, *easy chair*, or bed—grew constantly worse—no care being taken to preserve the spine from pressure: for, as yet, although I had a knowledge, doubtless somewhat superficial, of irritation of the spinal marrow, and occasionally practised according to the recommendation of the authors above quoted, strange as it may seem, I was permitting this disorder to make dreadful inroads on my own health and comfort, without even a suspicion of the true cause. And when, from a hint from Dr. A. L. Pierson, the truth burst in upon the mind, another week was nearly lost, in consequence of keeping a recumbent position on a feather bed. Hard and slow the progress towards recovery was made by sitting up most of the time, until the possession of the hydrostatic bed removed the chief obstacles to recovery. After the discovery of the true nature of my case, I abandoned the use of internal medicine altogether, satisfied that the curative process could not be materially advanced thereby. It would seem that the public have not yet realized the immense importance of Dr. Arnott's invention—have not yet perceived its very general application to the relief of all, who, from any cause, are compelled to assume, for days or weeks, a recumbent position. The medical journals, so far as I have seen, have only given Dr. Arnott's modest account of the uses to which it may be applied, without recommending the invention, as it deserves. But when we consider of how great importance ease of position must be to almost every curative process—be it of a broken bone, acute, or chronic disease—the hydrostatic bed becomes, so far as human comfort is concerned, the most important invention of the age.

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* "This happened about Christmas."

"The vast number and form of diseases, arising from irritation of the spinal marrow, and ganglia of the sympathetic nerve, and the probability that a great number of other diseases, such as fevers, &c. often become complicated with, and rendered fatal by spinal as well as cerebral irritation, caused, perhaps, by confinement to beds, which, instead of giving rest, irritate the spine, by too constant pressure—render it highly probable that the hydrostatic bed will, as soon as its value is generally known, save many lives, and an amount of human suffering vastly greater than imagination has yet conceived. Besides, even for the healthy it is a most luxurious bed—warm, dry, and easy. In point of comfort, it so far exceeds all other couches, that it will be strange indeed, if it should not come into extensive use for the common purposes of rest."

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Tumours of the Neck. By N. R. Smith, M. D. Professor of Surgery in the University of Maryland.—*Case I.* The remarks of Allan Burns on tumours of the neck and the practicability of their removal in certain cases, appear to me to inspire the young surgeon with too much dread of resorting to the knife in such instances. The situation of tumours in relation to the fascia of the neck, has, in my opinion, been too much regarded in determining the question of their removal. Mr. Burns perhaps, being the first to demonstrate particularly these expansions, was naturally disposed to make them of as much importance as possible in a practical point of view. From his remarks we should infer, that when a tumour is situated below the deep lamina of the cervical fascia, it can not have continued long and acquired any considerable magnitude, without establishing serious connexions with the important organs of the particular region in which it may chance to be located. This is undoubtedly true with regard to those tumours which speedily impart their peculiar nutritive actions to the surrounding parts; but by no means so in regard to those which are enclosed in cysts. I have often known them to be so forcibly pressed against other organs as to receive the impression of them without establishing any adhesion. I am satisfied from my own experience in the removal of such tumours, that the caution of Mr. Burns relative to their extirpation when they chance to be situated beneath the fascia, is far too strongly expressed.

In the winter of 1830, I visited Mrs. Gilliland, aged about twenty-five years, the wife of a farmer living near Gettysburg, Pa., for the purpose of examining a large tumour situated in her throat. I found it to be located on the right of the thyroid cartilage, under the border of the sterno-cleido-mastoid, and having the omo-hyoid muscle strained directly across its centre. It was of course completely beneath the deep fascia, and was in immediate contact with the sheath of the great vessels. Its form was ovoidal, its size that of a large goose's egg, and it occupied nearly the whole space from the angle of the jaw to the clavicle, creating great deformity. Its long diameter corresponded to the length of the mastoid muscle. It was very firmly bound down by the mastoid muscle and fascia, and was moved with great difficulty beneath them. I first satisfied myself that it was no portion of the thyroid gland. I also convinced myself that it did not involve in disease the great vessels and nerves of the neck. That by its mechanical pressure it irritated these organs was sufficiently manifest, for there existed a train of symptoms evidently resulting from mechanical pressure on the pneumogastric nerve. The stomach was much impaired in its functions, her appetite being capricious, and food often occasioning much distress in the organ soon after being taken. She was also sometimes affected with nausea, diarrhœa, alternating with costiveness. There was also not a little embarrassment of respiration. She suffered severely with occasional pains in the head, on the side corresponding to the disease. The pulse also gave evidence of considerable constitutional irritation.

The tumour had an elastic feel, which caused me to doubt whether it was encysted or sarcomatous. I am not positive as to its duration, but my impression is, that it had been several years in arriving at the magnitude then present.

After a careful examination of the case, in association with my friend Dr. Berluchy of Gettysburg, we decided that the extirpation of the tumour was in all probability practicable, and I expressed a willingness to undertake it; not without much apprehension, however, on account of its relations to the deep fascia, blood-vessels, and nerves. The patient and friends immediately assented to the proposition.

I commenced the operation by incising the integuments and platysma muscle along the border of the sterno-cleido-mastoid muscle to the whole extent of the tumour. Dividing the fascia of the neck, I encountered the omo-hyoid muscle, drawn like a ribbon obliquely across the tumour. From its extreme tension I found it necessary to divide it, and thus the tumour and its immediate coverings were completely exposed. I then carefully, with the director and knife, divided many layers of cellular tissue which enveloped it, and at length exposed the proper cyst of the diseased mass. This fortunately I found to be but little adherent to the surrounding part. I was enabled, indeed, to effect its division to a great extent by the use of the handle of the knife alone, occasionally, however, finding it necessary to divide a band of cellular tissue. The tumour had kept itself perfectly distinct from the surrounding parts, which every where presented a perfectly healthy appearance. On dissecting it carefully from its bed, I found that it had been so firmly pressed against the great vessels, and against the cartilages of the larynx, that it had received distinct impressions from them. The great vessels were lodged in a furrow on its inner and posterior part, but were separated without any considerable difficulty. I found it necessary to secure no artery until I had removed all its connexions except a small pedicle of vessels which attached it to the deepest part of the wound. These I included in a ligature, and then divided them.

On the removal of the tumour, an immense chasm presented itself in the throat, the cartilages of the larynx were completely exposed, and the great vessels stripped from near the clavicle to the angle of the jaw. I closed the integuments by means of three interrupted sutures assisted by adhesive strips, and brought the parietes of the wound into contact by means of an elastic compress. The tumour presented, on dissection, the medullary sarcomatous character.

The patient necessarily suffered severely during the operation, but I left her soon after in a more comfortable condition than might have been expected. As I subsequently learned from Dr. Berluchy, she recovered rapidly. A great part of the wound healed by the first intention, and the cicatrix formed in such a manner as to cause but little deformity. Those symptoms of gastric disorder